



Annual Report for the National Science Foundation ADVANCE Program

Academic Careers in Engineering & Science (ACES)  
Case Western Reserve University

Year 1: September 1, 2003 – August 31, 2004

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## Section II: Summary of Project Activities

### A. Project Staff

Dr. Lynn Singer, ACES principal investigator, is responsible for the oversight of the ACES program. In Year 1, Dr. Singer facilitated departmental initiatives and implementation of the ACES Steering Committee, Provost Leadership Retreat, and establishment of the ACES External Advisory Board. She presents the ACES program to the Case Western Reserve University community. Dr. Singer will continue 20% effort for Year 2.

Dr. John Angus, co-PI, allocated 15% effort to facilitate project activities in the School of Engineering and in the S&E departments. Dr. Angus retired on June 30, 2004. We will send a formal request for Dr. Diana Bilimoria to assume 15% effort in his place.

Dr. Mary Barkley, co-PI, allocates 30% effort to the ACES project and facilitates the ACES project activities in the School of Arts & Sciences, the School of Medicine, and in the S&E departments. She is responsible for the oversight of the ADVANCE Distinguished Lectureships and the ADVANCE Opportunity Grants program. Dr. Barkley heads the ACES Team comprised of scientists from different disciplines who serve as an internal advisory board and review proposals and provide recommendations for ACES programs. In addition, Dr. Barkley is responsible for the Fisk Faculty Exchange Program, ACES Summer Undergraduate Research Program, and the partner hiring network which all began in the Summer 2004.

Dr. Diana Bilimoria, co-PI, allocates 15% effort to the ACES project and facilitates ACES project activities in the School of Management and in the S&E departments. She is responsible for oversight of the research and evaluation effort of the ACES program including the baseline data collection, climate survey, chairs survey, and the space and salary analysis. In addition, Dr. Bilimoria provides oversight and evaluation for the following interventions: leadership coaching for deans and chairs, career-based coaching for women faculty, and mentoring committees for women faculty. Dr. Bilimoria provides resources, assessment tools, workshops, and consultations to faculty, chairs, and departments. Dr. Bilimoria supervises the graduate research assistant working on a case study of the Neurosciences Department and another graduate assistant examining the views of department chairs and women faculty at all levels about key factors in obtaining tenure and other positions of leadership in S&E departments. ACES requests NSF permission for Dr. Diana Bilimoria, co-PI, to increase her effort by 15% to support the ACES program in Dr. Angus' replacement.

Susan Perry, Senior Research Associate, is responsible for the qualitative and quantitative data collection (administering the baseline climate survey, conducting focus groups and interviews). She is responsible for correcting and verifying data, writing of the climate survey reports, creating faculty databases, and collecting the evaluation indicators needed for the year-end report. She also assists in the design, collection, and administration for the data needed for intervention activities such as the coaching and mentoring evaluations. Susan codes survey responses and enters survey data into the database. She researches and consolidates multiple sources of data, records, and prepares the data for analysis, supervises the transcription of focus group tapes, and creates codebooks. Susan allocates 100% of her time to the ACES project.

Beth McGee, Faculty Diversity Officer, is responsible for the oversight and implementation of conducting entrance and exit interviews and providing search committee support. She meets with Lynn Singer, ACES PI, and John Anderson, Provost, to discuss implementing these initiatives. Beth allocates 10% of her time to the ACES project.

Amanda Shaffer, Diversity Specialist, works with Beth McGee in providing training for search committees and faculty recruitment skills. She develops web-based and other tools to assist search committees in diversifying applicant pools and also conducts entrance and exit interviews. She collects qualitative and quantitative data on recruitment and retention activities and outcomes. Amanda prepares presentations to deliver at faculty meetings and other conferences and workshops. The co-PIs, Faculty Diversity Officer, and department chairs work with Amanda to develop these programs. Amanda allocates 100% effort to the ACES program. Continued funding for this position after Year 2 will be provided by Case.

Dorothy Miller, Director of the Center for Women, allocates 10% effort on the ACES project without cost to NSF. She provides networking events at the Center for Women and training of undergraduate and graduate students. Dorothy Miller and Klio Akrivou, graduate assistant, provide training for graduate and undergraduate students to eliminate gender bias toward women faculty. NSF funding has been allocated for Klio's effort which will continue in Year 2. Continued funding for this position after Year 2 will be provided by Case.

Weekly co-PIs meetings with Lynn Singer, John Angus, Mary Barkley, Diana Bilimoria, Hunter Peckham, Beth McGee, Amanda Shaffer, Dorothy Miller, and Susan Perry are held to discuss current initiatives and progress.

### **Graduate Students**

In Year 1, 4 graduate students worked on ACES and assisted with research, data collection, and evaluation. NSF support has been allocated for 3 graduate students in Year 2.

### **Project management system and infrastructure**

Project Coordinator, Annabel Bryan, coordinates all activities under the ACES program. In addition to providing administrative support of printing, copying, library searches, and web research, she also coordinates all meetings, works on presentations, promotional materials, project website, and publicizes programs and events as well as the newsletter. She drafts correspondence and reports on project activities. She is also responsible for managing the NSF ADVANCE budget, budgets for sub accounts for the Opportunity Grants and providing event planning for the Distinguished Lectureships program, Summer Undergraduate Research Program, and the Fisk Faculty Exchange program. She is currently learning new project management software to utilize in organizing all activities and milestones for the ACES program.

## **Partners**

The ACES Team comprises the co-PIs and 14 faculty members from various disciplines. The Team serves as an internal advisory board and reviews proposals and makes recommendations for the Opportunity Grant awards and Distinguished Lectureship nominations.

The ACES Steering committee meets monthly to guide the direction of the ACES program and make recommendations on implementing ACES initiatives. The committee consists of the PI, co-PIs, deans of the 4 participating schools (Arts and Sciences, Engineering, Management, and Medicine), the Faculty Diversity Officer, and the Women's Center Director.

The Resource Equity Committee (REC) meets monthly and assists with the design, implementation, analyses of data and questionnaire for the ACES program. Attendees include Diana Bilimoria, Patricia Higgins, Susan Perry, Bonnie Richley Cody, Linda Robson, Eleanor Stoller, and Cyrus Taylor. Diana Bilimoria serves as liaison and provides oversight for the research and evaluation efforts. Susan Perry and the graduate research assistants provide research support to the REC and ACES program.

The External Advisory Board provides evaluation and recommendations for the ACES program. An Advisory Board meeting is currently being planned for the Fall 2004. Members of the board include Lotte Bailyn (Department of Organizational Behavior at MIT), Jeanette Graselli Brown (Chair of the Ohio Board of Regents), Janie Fouke (Dean of the College of Engineering at Michigan State University), Isiah Warner (Vice-Chancellor of Strategic Initiatives at Louisiana State University) and Christine Russell (President of Women in Lubrizol Leadership). The Board also includes two PIs of successful ADVANCE awards, one from 2002 and one from 2003.

## **Other collaborators or contacts**

P. Hunter Peckham, Professor in the Department of Biomedical Engineering, participates in weekly co-PIs meetings and collaborates with ACES senior personnel. No salary support from NSF is requested for Dr. Peckham.

## **Internal Collaborators**

Kathy Gill, Director of Employer/Student Relations, Biomedical Engineering  
Susan Friemark, Director, MSASS Student Services  
Debra Fink, Assistant Director of Career & Student Services, MSASS  
James Alexander, Chair, Department of Mathematics

## **External Collaborators**

Leonora R. Roth, PhD, Training Coordinator Energizer Battery Co, Westlake, Ohio  
Sandra Duncan Holmes and Sandy Schwartz, National Conference for Community and Justice, Cleveland, Ohio  
Trevor Wooley, Chair University of Michigan Math Department  
Jerry Bona, Chairman of the Math Department, University of Illinois at Chicago.  
Jim Hirstein, Chair, Department of Mathematical Sciences, University of Montana  
Mary Feng, Utah State University  
Jennifer Sheridan, University of Wisconsin, Madison

Amanda Gallagher, University of Rhode Island  
Jeannette E. Doeller, University of Alabama at Birmingham  
Catherine Amelink, Virginia Tech  
Mary Ellen Jackson, UMBC  
Pat Hyer and Susan M. Willis-Walton, Virginia Tech  
Lisa M. Frehill, New Mexico State University  
Dr. Ruth A. Dyer, Kansas State University

### **EXIT INTERVIEW COLLABORATION**

In creating the new Faculty Exit Interviews and Surveys, Amanda Shaffer began by querying the ADVANCE email list and received responses about both formal and informal exit procedures using sample documents from Case Human Resources staff exit interview, a survey and final report from Lisa M. Frehill, (New Mexico State University), documents from North Carolina State University, California State University-San Bernadino, and Pennsylvania State University and our own climate and accreditation surveys. Pat Hyer and Susan M. Willis-Walton (Virginia Tech) also provided samples. The inquiry sparked an ongoing conversation between Mary Feng and Amanda about developing a master list of exit questions for use across the 19 ADVANCE institutions. With some questions being common to all ADVANCE exit interviews the data would allow for comparisons.

### **FACULTY TRAINING DEVELOPMENT**

In developing the ACES Faculty presentation Amanda Shaffer collaborated with Leonora R. Roth, PhD, who is the training and development manager for Energizer Battery Company. Ms. Roth, a graduate of Case School of Engineering, had a dual perspective as a female graduate of the Case program and a female trainer of Engineers in industry. Over multiple meetings Ms. Roth offered insights, materials, and resources on how she successfully completes training and intervention in an often-hostile environment.

Exploring how diversity and gender bias training was conducted outside of academia led Amanda to Sandra Duncan Holmes and Sandra Schwartz at National Conference for Community and Justice. Their Lead Diversity program analyzes the personal, corporate and community impact of diversity leadership. ACES is discussing ongoing collaboration for forging relationships with community and civic leaders involved in their program in order to enhance the reach and potential of the Partner Hiring Network.

Internally, Amanda is interviewing the 31 S&E department chairs (beginning with the four test departments) to explain ACES and establish how we might assist their department to access and implement our initiatives. Amanda is working with the Mathematics Department Chair to develop a presentation that will in his words, “overcome his pocket of resistance”. The Chair is very interested in improving the search process and climate in his department. To this end Amanda has been interviewing Math Department Chairs from the 19 ADVANCE institutions to determine uniform procedures, and what aspect of ADVANCE at their institution has been most beneficial. Amanda has spoken with Trevor Wooley, Chair University of Michigan Math Department, Jerry Bona, Chairman of the Math Department, University of Illinois at Chicago, and James Hirstein, Chair, Department of Mathematical Sciences, University of Montana

## **PARTNER HIRING NETWORK**

Other internal collaborators include Kathy Gill, Debra Fink and Susan Friemark, all of whom are involved with Career Services for Students, separate from the Career Services offered by the University. They, and others like them, have developed personal relationships with outside industry in order to facilitate student co-op placement, internships, and job interviews. Amanda is working to develop a consortium of the same kind of contacts, and perhaps a database, for collaboration in partner hiring that takes place outside of the university.

External collaborators on Partner Hiring have been with Jennifer Sheridan, University of Wisconsin, who provided information on their formal and informal mechanisms (since 1989), obstacles to implementation, and obstacles to tracking partner/dual hires. Sheila Edwards Lange, of University of Washington, also shared information on obstacles and implementation of their informal policy, in place since 1990. They are currently working toward a formalized policy throughout their ADVANCE activities. Additional information was provided by Amanda Gallagher, (University of Rhode Island), Jeannette E. Doeller, (University of Alabama), Catherine Amelink, (Virginia Tech), and Mary Ellen Jackson, (UMBC).

Correspondence and conversation with other ADVANCE institutions about their successes, obstacles and potential solutions has been invaluable especially the feeling of community experienced when requesting assistance. Responses are immediate and generous with information, and more importantly, timely.

## B. Activities, Findings, and Contributions

### **VISION**

The ACES vision at Case Western Reserve University is for institutional transformation that leads to increased transparency and accountability as well as more equitable practices, policies, procedures, and structures. Our activities, findings, and contributions for Year 1 are summarized below including the difficulties in implementing proposed activities and approaches to address them.

### **TRAINING AND DEVELOPMENT**

#### *Mentoring*

Diana Bilimoria, co-PI, oversees the mentoring program and provided guidance in establishing mentoring committees for the 14 women faculty in the test departments. The chairs of the four test departments have invited three faculty members to join the committee for each woman faculty member in their department. Mentoring committees consist of a senior departmental colleague, a faculty member from within the university but outside the department, and a disciplinary member from outside the university. The mentors have field-specific or institution specific experience and expertise that a mentee can draw on for guidance and counsel. Mentees drive this process, and are responsible for setting up mentoring committee meetings for facilitation of their career development. The ACES program sponsored two "Successful Mentoring" workshops for both mentors and mentees.

Challenges of the mentoring program include getting women faculty to optimally utilize their networks and mentors, and to take responsibility to drive the process. Some women faculty could not find suitable male department colleagues to serve as mentors. Mid-term evaluation of the mentoring program will occur in the Fall, and progress updates and recommendations will be made to improve mentoring at Case. Feedback from informal luncheons with the women faculty indicate that women have had positive experiences when they have utilized their committees. For example, mentees have been invited through their mentor to speak at conferences and they have begun to use their mentors as resources for assistance in grant writing. The executive coaching initiative described below complements the mentoring program by providing mentees with coaches who help them to focus on their career vision, set goals, and develop plans. Coaches also encourage mentees to utilize their mentoring committees.

#### *Coaching*

Diana Bilimoria oversees the executive coaching program for women faculty and chairs of the test departments and deans of the four participating schools. An executive coach is someone who has general academic/organizational experience and who provides performance-related and career-related advice. The coach helps the coachee to specifically determine career and leadership vision, goals, plans, and actions. They give advice, resources, and feedback on how to best accomplish the identified vision. The executive coaching intervention consists of a 6-session coaching program for women faculty and a 12-session coaching program for deans and chairs. Monthly Coaches Cohort meetings, which consists of the co-PIs and six coaches, are conducted to plan and design the coaching template which will be extended to all S&E schools in Phase II.



One of the challenges in establishing the executive coaching program was that two of the four participating schools have new deans, and one position is still to be filled. To address the first challenge, Lynn Singer and Diana Bilimoria contacted the deans to discuss the ACES program and the benefits of executive coaching. Two of the deans are now participating in the executive coaching and have scheduled sessions this summer. A third dean has elected to drive his own coaching program with a nationally-recognized mentor. The fourth dean will be approached when he/she arrives our campus.

Three of the four chairs of the test departments are successfully undergoing executive coaching, including 360 degree feedback processes. The fourth chair has just been appointed and will be approached with the offer of executive coaching. Another challenge was that female faculty in the test departments were concerned about the amount of time they perceive they are being asked to spend on ACES activities. This challenge is being addressed through the monthly luncheons and ongoing communication with women faculty. The luncheons provide a chance to talk about their experiences at Case and to share stories about their successes and difficulties in achieving their goals. Mid-term evaluation of the coaching intervention has just been sent out to women faculty to provide insight into improving the coaching experience. Mid-term evaluation of the coaching experience for the chairs will be sent out in the fall.

#### ***ADVANCE Opportunity Grants***

\$60,000 is available annually (cost share) to provide support for women faculty in the S&E departments for projects and activities where funding is difficult to obtain through other sources. We have received a total of 18 proposals and were able to award 9 small grants to maximize chances for success of women faculty at Case. After assessing the need, we have found that these grants are in strong demand and have asked for additional university commitment from the Provost Opportunity Fund to fund the remaining proposals.

<b>ADVANCE Opportunity Grant Awards</b>	
<b>Awardee</b>	<b>Department</b>
Kathleen Kash	Physics
Hue Lee Kaung	Anatomy
Heather Morrison	Astronomy
Elizabeth Short	Psychology
Ruth Siegel	Pharmacology
Karen Skubal	Civil Engineering
Caroline Sussman	Physiology & Biophysics
Lee Ann Thompson	Psychology
Elisabeth Werner	Mathematics

## **OUTREACH ACTIVITIES**

### ***ADVANCE Distinguished Lectureships***

\$100,000 is available annually (cost share) to provide 10 Distinguished Lectureships to senior women scientists a year for a minimum stay of 2 days and a maximum stay of 2 weeks at Case. The lecturer is invited based on mutual research interests with faculty in the host department. She will give 3-6 lectures and a public lecture followed by a reception. In Year 1, ACES sponsored 3 ADVANCE Distinguished Lectureships. We have received 8 proposals for ADVANCE Distinguished Lectureships for Year 2 and have approved funding for all 8 visits. The goal of the ADVANCE lecturers on campus is to provide networking opportunities and raise the visibility of S&E women faculty.

<b>ADVANCE Distinguished Lectureship</b>	
<b>ADVANCE Lecturer</b>	<b>Host Department</b>
Dawn Bonnell, University of Pennsylvania	Department of Materials Science and Engineering
Dr. Debra Rolison, Naval Research Laboratory	Department of Chemistry
Nancy Adler, McGill University	Department of Organizational Behavior

### ***Outreach to Departments***

Diana Bilimoria and P. Hunter Peckham presented the ACES program to the Department of Biomedical Engineering and the Department of Mechanical & Aerospace Engineering departments. This was in response to one of the challenges of establishing the full participation of deans, chairs, and faculty in the process to ensure buy in and signal the importance of the success of ACES activities. The ACES program is currently planning to make short presentations at faculty meetings in all S&E departments. Another concern is that male faculty and chairs of the test departments are cautious, in part because of many transitions/uncertainty in the larger university, in part because they are very busy, and in part because many activities focus specifically on women's advancement and retention. The co-PIs have addressed these issues through open communication and inviting faculty to participate in ACES initiatives. One department chair has given the ACES program suggestions for future workshop topics and is an active participant in ACES activities. Lynn Singer, PI, has given presentations and updates about ACES at Faculty Senate Meetings and provides handouts of the ACES newsletter at events and other meetings which she attends. When the grant was received last fall, Dr. Singer gave presentations to the deans and chairs of the four participating schools. Presentations and outreach are important in establishing the ACES program and encouraging university participation.

### ***Search Committee Support***

Amanda Shaffer, Beth McGee, the co-PIs, and the ACES Steering Committee developed new guidelines for faculty search committees that incorporate best practices from faculty recruitment materials at research universities. Amanda Shaffer has been conducting one-on-one meetings with ACES department chairs to assess current procedures for faculty searches and areas for improvement. The recommendations include accountability on the part of deans and department chairs and proactive involvement and oversight by EOD. The new guidelines were presented by Lynn Singer and Beth McGee to the Dean's Council for recommendations. Lynn Singer and

Beth McGee presented the new search committee guidelines to Provost John Anderson and they were approved. Implementation is in process and Amanda will be giving presentations to search committees and will also be available to answer questions on creating a more diverse applicant pool.

Amanda Shaffer developed additional tools to support search committees. She has created web tools for Faculty Search Resources with links to minority and women's associations for job postings. She has also been developing resources to track faculty recruitment and retention.

### *Minority Pipeline*

In Year 1, ACES funded 6 minority women students for the Summer Undergraduate Research Program. Four of these students were from Fisk University building on our university collaboration with Fisk. One student was from the University of Maryland, Baltimore County and the other was from Edinboro University in Pennsylvania. All ACES fellows have been placed with Case faculty mentors. They spend 10 weeks conducting research in an area of their interest. In addition, they are invited to participate in social events sponsored by other summer research programs. The goal of the summer program is to encourage minority women students to pursue academic careers in S&E departments. Participants will return an evaluation form at the end of the program.

<b>ACES Summer Undergraduate Research Program</b>	
<b>ACES Fellow</b>	<b>Faculty Mentor/Department</b>
Ami Barry, Fisk University	Dr. Harihara Baskaran, Chemical Engineering
Dionne Griffin, Edinboro University	Dr. Mary Barkley, Chemistry
Shayla Merry, Fisk University	Dr. Richard Hanson, Biochemistry
Vivien Rico, University of Maryland, Baltimore County	Dr. Dawn Taylor, Biomedical Engineering
Elizabeth Stewart, Fisk University	Dr. Chris Cullis, Biology
April Walls, Fisk University	Dr. Michael Zagorski, Chemistry

Dr. Sanjukta Hota, Professor in the Department of Mathematics at Fisk University, visited Case for 2 weeks in the summer as part of the Fisk Faculty Exchange program. Dr. Hota was hosted by Dr. Gerald Saidel, Professor in the Department of Biomedical Engineering. Dr. Saidel invited her to participate in a Molecular Modeling for Integrated Systems (MIMS) 3 day workshop. Dr. Hota also met with various faculty members in her research interest area of respiratory and mathematical modeling. Dr. Hota had the opportunity to meet with various Case administrators and the ACES co-PIs. The goal of the faculty exchange is to build a strong bridge with Fisk University for minority students and to provide role models for minority women students at Case. An evaluation of the program is currently being developed for Dr. Hota to provide insight into her visit at Case.

### ***Networking Luncheons***

At the request of the women faculty in the test departments, ACES hosts monthly networking luncheons. These luncheons have been well attended and provide women faculty a chance to talk about their experiences at Case and also to discuss success stories and challenges with the mentoring and coaching initiatives. One co-PI, either Diana Bilimoria or Mary Barkley, attends the luncheon.

### ***Networking Events***

The Center for Women is currently planning 2 faculty workshops in the Fall led by well-known experts in networking and other career development topics. In addition, the Center for Women will host 2 informal networking events in the fall for women faculty, postdocs, and students.

### ***Undergraduate and Graduate Student Training***

The Center for Women is conducting research for training workshops on gender schemas for undergraduate and graduate students in the Fall. Three workshops will be provided for first year S&E graduate students and 3 for undergraduates in large S&E classes.

### ***Conferences/Workshops***

Lynn Singer and Diana Bilimoria participated in the ADVANCE National Conference at Georgia Tech. Diana Bilimoria participated in the mini-PI meeting at the University of Washington in February. Mary Barkley participated in the ADVANCE Dual Career Symposium at the AAAS Pacific Meeting at Utah State University. Two department chairs participated in the University of Washington's ADVANCE Leadership Workshop scheduled in July 2004. Lynn Singer has asked the two chairs to report at the Provost Leadership Retreat sponsored by the ACES program on October 26, 2004. The Deans of the four participating schools, chairs of the 31 S&E departments, and university leadership including President Edward Hundert, will be in attendance.

## **C. PUBLICATIONS AND REPORTS**

### ***REPORTS***

ACES continues to analyze data from Year 1 from the research and evaluation effort. A report from the Climate Survey will be released at the end of the summer. Another report summarizing focus group and individual interviews conducted during Year 1 is appended (Appendix 2). A summary of the Neurosciences Case Study is included in Appendix 6. The next section details the evaluation effort including research and evaluation plans for Year 2.

### ***PUBLICITY AND OUTREACH MATERIALS***

In the second quarter, ACES launched the program website which is located at [www.case.edu/admin/aces](http://www.case.edu/admin/aces). The website includes information on current ACES activities, search committee web tools, and ACES presentations and reports. We are in the process of redesigning the website to make it more interactive and securing forms to be submitted online.

Lynn Singer, PI, presented “Assessing and Improving the Progress of Women Faculty at Case” to the Deans and Chairs in the Fall 2003. Amanda Shaffer is currently revising that presentation to utilize it for general presentations to all S&E departments for Year 2. Another presentation focusing on the new search committee guidelines is also under development and will be utilized in Year 2.

Flyers and handouts have been created for all programming and events. ACES created a Spring newsletter which details all of our initiatives. We are currently developing materials which will include our activities and findings for Year 1. ACES has created two call for proposal flyers and we are in the process of creating a faculty brochure on diversifying searches.

## **D. Evaluation of ADVANCE ACES Program**

An innovative feature of the ACES program is an emphasis on self-study and evaluation. The purpose of this report is in part to describe the structure of the evaluation plan for the ACES project. Also, this year's report will include baseline data, with future annual collections of these data to be reported in years 2-5 to compare with this baseline as a measure of progress towards ADVANCE objectives. A third purpose of the report is to summarize ongoing evaluation of the impact of intervention/transformational activities. A mixed methods approach including qualitative and quantitative data is utilized in the Phase I evaluation. The various components of this evaluation are described in more detail below.

### **Baseline Data**

#### **Data Sources**

Baseline data for assessing institutional transformation are established through multiple sources for all S&E departments. Sources of quantitative faculty data include the Provost's Office, Institutional Research, Human Resources, S&E department chairs and administrators. Institutional Research and Human Resources datasets include information about salary, years in rank, dates of hire, gender, ethnicity, tenure rates, hiring, and attrition. In addition to these resources, all S&E departments were individually contacted and the department chair or administrator was asked to complete a structured survey for all their department's faculty members (see Appendix 1). The purpose of this survey was to collect supplemental data not available in personnel records, such as percentage of salary that is soft money, student advising, committee involvement, teaching loads, and office and lab space. To assess university climate, a series of focus groups were conducted and an online university-wide survey of faculty was also administered.

Overall there has been great cooperation from all data sources to provide relevant information. A continuing challenge has been to identify sources for and institutionalize data collection for the various NSF ADVANCE indicators. Case has very recently begun using a coordinated database management system to systematize future data collection efforts.

#### **Qualitative Data – Focus Groups**

The purpose of conducting focus groups was two fold. First, it sought to establish baseline qualitative data about the experiences of women faculty in 4 test departments for the NSF ADVANCE program. The second aim of these interviews is to extend and verify whether conditions observed in 2000 by the Case Resource Equity Committee (REC) still exist. During the three-year interim between the first and current waves of data collection, findings from the REC committee's initial report were instrumental in Case's pursuit and attainment of an interdisciplinary NSF ADVANCE grant.

Three focus groups were conducted: one for mixed rank male faculty; one for mixed rank female faculty; and a final focus group for department chairs. Focus groups ranged from 3 to 9 participants. Seven additional individual interviews, following the same protocol and script, were offered to faculty members whose schedules conflicted with the timing of the focus groups. Among the 4 test departments, there are a total of 97 primary faculty members; 80% of this sample is male (N=78) and 20% is female (N=19). Overall, 23 faculty members participated, for a response rate of 24%, with 19 of the male faculty from the test departments, 47% of the female faculty members from test departments,

and 100% of the department chairs participating. The data collected from the respondents resulted in 11 hours of audio-tape and 80 pages of transcribed text.

Findings from the focus group and individual interviews contained the following trends in perception, across both male and female respondents:

1. Proportional rarity of women is an issue at Case.
2. Female faculty members deal with token dynamics associated with being a statistical minority.
3. The structure of the academic environment is gendered, advantaging men's careers.
4. Women perceive their rarity as a disadvantage, whereas men view it as an advantage.
5. Case, as an institution, is resistant to change and improvement efforts.

These themes were evident at multiple levels, including home departments and schools, the University, and academia as a whole. The detailed report released by the REC from the test departments' focus groups is appended to this report (see Appendix 2).

## Quantitative Data

Descriptive Statistics (as of 30 June 04):

### Women Faculty (A. # and % of women in S&E departments)

S&E Departments	Full-Time	Part-Time/Adjunct	Total
Female	111 (22%)	27 (33%)	138 (23%)
Male	400 (78%)	56 (67%)	456 (77%)
<b>Total</b>	<b>511</b>	<b>83</b>	<b>594</b>

University	Full-Time	Part-Time/Adjunct	Total
Female	727 (31%)	508 (33%)	1235 (32%)
Male	1616 (69%)	1029 (67%)	2645 (68%)
<b>Total</b>	<b>2343</b>	<b>1537</b>	<b>3880</b>

Source: Institutional Research

The above tables show that the percentage of full-time women faculty is lower in the S&E departments than in the university as a whole, whereas the percentage of women part-time faculty is the same as for the whole university. As compared with overall university percentages, women are underutilized in full time positions in S&E departments.

Below is the gender distribution of full and part time faculty broken down by department:

S&E Full-time Faculty	Department	Full-Time		Part-Time/Adjunct	
		F	M	F	M
School					
Arts & Sciences	Anthropology	5	8	2	1
	Astronomy	1	2	0	1
	Biology	6	16	1	0

	<b>Chemistry</b>	3	18	0	1
	<b>Geological Sciences</b>	1	7	0	0
	<b>Mathematics</b>	4	18	0	2
	<b>Physics</b>	3	21	0	0
	<b>Political Science</b>	3	5	2	1
	<b>Psychology</b>	4	8	4	2
	<b>Sociology</b>	4	6	1	0
	<b>Statistics</b>	5	3	0	0
<b>Total</b>		<b>39 (26%)</b>	<b>112 (74%)</b>	<b>10 (56%)</b>	<b>8 (44%)</b>
<b>Engineering</b>	<b>Biomedical Engineering</b>	1	18	2	10
	<b>Chemical Engineering</b>	1	13	0	1
	<b>Civil Engineering</b>	1	9	0	0
	<b>Electrical Engineering &amp; Computer Science</b>	2	26	0	4
	<b>Macromolecular Science</b>	3	10	0	0
	<b>Materials Science &amp; Engineering</b>	0	13	0	2
	<b>Mechanical and Aerospace Engineering</b>	2	20	0	2
<b>Total</b>		<b>10 (8%)</b>	<b>109 (92%)</b>	<b>2 (10%)</b>	<b>19 (90%)</b>
<b>Medicine</b>	<b>Anatomy</b>	5	9	1	3
	<b>Biochemistry</b>	6	32	0	1
	<b>Genetics</b>	8	17	4	4
	<b>Microbiology</b>	4	6	2	2
	<b>Neurosciences</b>	4	14	0	2
	<b>Pharmacology</b>	7	8	0	0
	<b>Physiology &amp; Biophysics</b>	8	32	1	1
	<b>RNA</b>	3	6	0	0
<b>Total</b>		<b>45 (27%)</b>	<b>124 (73%)</b>	<b>8 (38%)</b>	<b>13 (62%)</b>
<b>Management</b>	<b>Economics</b>	3	11	1	5
	<b>Management Info.</b>	2	8	1	2
	<b>Operations Research</b>	1	11	1	3
	<b>Organizational Behavior</b>	6	7	1	0
	<b>MAPS</b>	5	18	3	6
<b>Total</b>		<b>17 (24%)</b>	<b>55 (76%)</b>	<b>7 (30%)</b>	<b>16 (70%)</b>

Source: Institutional Research



Of all 511 S&E full-time faculty, 442 are on the University's payroll (others are paid through various hospital arrangements). Faculty who are paid through the university are the only ones with available data from Human Resources.

<b>S&amp;E Faculty on Payroll</b>	<b>Full-Time</b>
<b>Female</b>	89 (20%)
<b>Male</b>	353 (80%)
<b>Total</b>	<b>442</b>

Source: Institutional Research – Human Resources

This table indicates that 20% of full-time, S&E faculty, who are paid by the university are women.

The remaining data presented below primarily pertain to these full-time Science and Engineering faculty members.

### **ADVANCE Objectives**

#### *Equitable Faculty Recruitment Patterns*

Faculty Hired by Rank and Gender for AY 2003-2004

<b>Faculty Hires</b>	<b>S&amp;E Departments</b>		<b>University</b>	
	<b>F</b>	<b>M</b>	<b>F</b>	<b>M</b>
<b>Visiting Faculty</b>	0	0	1	0
<b>Sr. Instructor</b>	1	1	5	4
<b>Instructor</b>	7	4	19	12
<b>Assistant Professor</b>	6	17	20	47
<b>Associate Professor</b>	2	3	5	14
<b>Professor</b>	1	4	3	4
<b>Total</b>	<b>17(37%)</b>	<b>29 (63%)</b>	<b>53 (40%)</b>	<b>81 (60%)</b>

Source: Institutional Research – Human Resources

26% (46 out of 180) of all new university hires are Science and Engineering faculty. Of these hires, 37% are women, and 63% are men, which is a higher percentage of women than the current proportion in these departments (20%), but slightly lower than the hiring rates of women university-wide (40%).

#### *Promotion and Retention of Women*

##### **Rank Information for AY 2003-2004**

*(D. Years in rank by gender)*

<b>S&amp;E Average Years in Rank</b>		<b>F</b>	<b>M</b>
<b>Arts &amp; Sciences</b>	<b>Instructor</b>	<b>1.5</b>	<b>2</b>
	Range	1-2	2
	<b>Assistant Professor</b>	<b>3.69</b>	<b>4.12</b>

	Range	0-8	1-24
	<b>Associate Professor</b>	<b>7.20</b>	<b>9.18</b>
	Range	2-12	2-32
	<b>Professor</b>	<b>8.30</b>	<b>15.71</b>
	Range	2-20	0-38
<b>Engineering</b>	<b>Instructor</b>	<b>N/A</b>	<b>N/A</b>
	Range		
	<b>Assistant Professor</b>	<b>2.25</b>	<b>3.54</b>
	Range	1-4	0-7
	<b>Associate Professor</b>	<b>5.00</b>	<b>9.63</b>
	Range	2-8	1-34
	<b>Professor</b>	<b>14.33</b>	<b>15.45</b>
	Range	10-21	1-44
<b>Management</b>	<b>Instructor</b>	<b>N/A</b>	<b>N/A</b>
	Range		
	<b>Assistant Professor</b>	<b>3.78</b>	<b>3.38</b>
	Range	2-6	1-6
	<b>Associate Professor</b>	<b>9.00</b>	<b>13.50</b>
	Range	5-16	1-26
	<b>Professor</b>	<b>2.00</b>	<b>15.92</b>
	Range	2	1-36
<b>Medicine</b>	<b>Instructor</b>	<b>N/A</b>	<b>N/A</b>
	Range		
	<b>Assistant Professor</b>	<b>3.73</b>	<b>4.75</b>
	Range	0-8	0-43
	<b>Associate Professor</b>	<b>4.00</b>	<b>8.41</b>
	Range	1-17	0-39
	<b>Professor</b>	<b>10.25</b>	<b>14.59</b>
		1-33	1-36

Source: Institutional Research – Human Resources

While the average number of years in rank is higher in all cases for men in this table, further analysis is needed. Ranges have been included to show that the source of these mean differences is the fact that in all ranks in all schools, there are at least a few men who have been that rank over twice or sometimes three times as long as the most senior woman in that rank. This difference may also be influenced by women being a greater percentage of recent hires and recent promotions (therefore having few years in rank) than they have been in the past, compared to their percentage of the faculty as a whole in these departments. Outliers will be examined in each rank and perhaps re-categorized for future analysis.

### **Tenure Status**

*(B. # and % of women in tenure-track positions by rank and department)*

S&E Tenure-track Faculty School	Department	Assistant		Associate		Professor	
		F	M	F	M	F	M
Arts & Sciences	Anthropology	1	2	1	2	3	3
	Astronomy	0	0	1	1	0	1
	Biology	2	2	0	3	0	8
	Chemistry	2	3	0	2	0	10
	Geological Sciences	1	2	0	2	0	3
	Mathematics	0	1	0	1	2	11
	Physics	1	0	0	3	1	14
	Political Science	2	1	0	1	0	3
	Psychology	1	3	2	0	1	5
	Sociology	1	1	0	2	2	1
	Statistics	1	1	1	0	1	2
<b>Total</b>		<b>12</b> <b>(42.9%)</b>	<b>16</b> <b>(57.1%)</b>	<b>5</b> <b>(22.7%)</b>	<b>17</b> <b>(77.3%)</b>	<b>10</b> <b>(14.1%)</b>	<b>61</b> <b>(85.9%)</b>
Engineering	Biomedical Engineering	1	5	0	3	0	8
	Chemical Engineering	1	1	0	1	0	9
	Civil Engineering	1	0	0	3	0	6
	Electrical Engineering & Computer Science	0	3	0	12	1	10
	Macromolecular Science	0	1	1	2	2	7
	Materials Science & Engineering	0	0	0	3	0	8
	Mechanical and Aerospace Engineering	1	1	1	3	0	12
	<b>Total</b>		<b>4</b> <b>(26.7%)</b>	<b>11</b> <b>(73.3%)</b>	<b>2</b> <b>(6.9%)</b>	<b>27</b> <b>(93.1%)</b>	<b>3</b> <b>(4.8%)</b>
Management	Economics	1	4	1	2	1	4
	Management Info.	1	3	1	1	0	3
	Operations Research	1	1	0	5	0	4
	Organizational Behavior	2	1	3	1	0	5
	MAPS	4	4	0	5	0	9
<b>Total</b>		<b>9</b> <b>(40.9%)</b>	<b>13</b> <b>(59.1%)</b>	<b>5</b> <b>(26.3%)</b>	<b>14</b> <b>(73.7%)</b>	<b>1</b> <b>(3.8%)</b>	<b>25</b> <b>(96.2%)</b>
Medicine	Anatomy	0	5	1	3	1	0
	Biochemistry	1	4	0	3	1	9
	Genetics	1	2	2	3	1	4
	Microbiology	0	1	1	1	1	2

	<b>Neurosciences</b>	0	2	1	4	1	6
	<b>Pharmacology</b>	3	2	1	2	2	3
	<b>Physiology &amp; Biophysics</b>	0	4	1	8	1	10
	<b>RNA</b>	0	1	1	2	0	1
<b>Total</b>		<b>5 (19.2%)</b>	<b>21 (80.8%)</b>	<b>8 (23.5%)</b>	<b>26 (76.5%)</b>	<b>8 (18.6%)</b>	<b>35 (81.4%)</b>
<b>Overall</b>		<b>30 (33%)</b>	<b>61 (67%)</b>	<b>20 (19%)</b>	<b>84 (81%)</b>	<b>22 (11%)</b>	<b>181 (89%)</b>

Source: Institutional Research – Human Resources

Based on a faculty ratio of 20% women and 80% men in Science and Engineering departments, women are overrepresented at the Assistant Professor rank (33%), at the appropriate proportion at Associate Professor level (19%), and underrepresented in the Professor rank (11%). The School of Management has the fewest full professors who are women (only 1), and Arts & Sciences departments have the most (14.1% of their full professors). The School of Management also has the most overrepresentation at the Assistant Professor rank of women (40.9%).

### Tenure-track Status

*(F. # and % of women in non-tenure-track positions – teaching and research)*

<b>S&amp;E Tenure-track Status</b>	<b>Tenured</b>	<b>In Tenure Track</b>	<b>Total (Tenured + In Tenure Track)</b>	<b>Non-Tenure Track</b>
<b>Female</b>	37	37	74 (18%)	15 (42%)
<b>Male</b>	246	86	332 (82%)	21 (58%)
<b>Total</b>			<b>406</b>	<b>36</b>

Source: Institutional Research – Human Resources

Of the 89 full-time women faculty in S&E, 83% (74 out of 89) are in tenured or tenure-track positions and 17% (15 out of 89) are in non-tenure track, whereas 94% (332 out of 353) of full-time men are in tenured or tenure-track positions, and 6% (21 out of 353) are in non-tenure track. Women are overrepresented in non-tenure track full-time S&E positions, making up 42% of them, compared to their 20% prevalence in the full time faculty positions as a whole.

**Promotion and Tenure Information for AY 2003-2004**  
*(C. Tenure promotion outcome by gender)*

Tenure Awards	S&E Departments	University
Female	1 (7%)	5 (19%)
Male	13 (93%)	21 (81%)
<b>Total</b>	<b>14</b>	<b>26</b>

Source: Office of the Provost

Tenure Denials	S&E Departments	University
Female	0	1
Male	1	0
<b>Total</b>	<b>1</b>	<b>1</b>

Source: Office of the Provost

Across the whole university, there were 26 successful candidacies for tenure, 21 men (81% of all tenure awards), and 5 women (19% of all tenure awards). Of all candidacies, 96% of men who were up for tenure were awarded it (26 out of 27), whereas 83% of women up for tenure were awarded (5 out of 6).

Promoted to Professor	S&E Departments	University
Female	2 (20%)	10 (29%)
Male	8 (80%)	24 (71%)
<b>Total</b>	<b>10</b>	<b>34</b>

Source: Office of the Provost

The percentages in the Tenure Awards table and Promotion Outcomes table above present the gender distribution of faculty who were promoted in AY 2003-2004. However, in interpreting tenure and promotion rates by gender, it is important to consider the number of faculty eligible for promotion. In our continuing analyses, we will gather information on the number of faculty reviewed for tenure and calculate the percentage of successful candidates separately for men and women (i.e., # successful candidates/# faculty reviewed for tenure). Similarly, we will recalculate rates of promotion to Full Professor by comparing the number of female (and male) promotions to the number of women faculty potentially eligible for promotion (based on years in rank of associate professor).

**Attrition Statistics**  
*(E. Time at institution and attrition by gender)*

Attrition	University	Average Yrs at Institution	S&E Departments	Average Yrs at Institution
Female	13 (30%)	6	2 (22%)	6
Male	30 (70%)	10	7 (78%)	16
<b>Total</b>	<b>43</b>		<b>9</b>	

Source: Institutional Research

For the university as a whole, 13 female faculty and 30 male faculty left the university. Of Science and Engineering faculty, both women resigned, and of the men, 2 retired, 1 was terminated, and 6 resigned. In the university as a whole, 1 woman was deceased and 12 resigned, and of the men, 1 was deceased, 3 retired, 2 were terminated, and 34 resigned. Men constituted a larger percentage (70%) of faculty leaving the university than did women (30%) at a ratio similar to their presence in the faculty. A more meaningful comparison can be made, however, for S&E departments by examining the percentage of women faculty and the percentage of men faculty who leave compared to their risk for inclusion. Calculating percentages based on persons at risk for inclusion in the numerator reveals a slightly higher rate of attrition for women in S&E ( $2/89 = 2.25\%$ ) than for men ( $7/353 = 1.98\%$ ). Our continued analysis will incorporate years in most recent rank prior to departure.

### ***Greater Representation of Women in Leadership Positions***

The data for endowed chairs, promotion and tenure Committee participation, and administrative positions have been combined into a leadership table that appears below.

<b>S&amp;E Leadership</b>	<b>Named Chair</b>	<b>Dept. P&amp;T Committee</b>	<b>Administrative Position</b>
<b>Female</b>	8 (14%)	17 (22%)	9 (15%)
<b>Male</b>	49 (86%)	59 (78%)	51 (85%)
<b>Total</b>	<b>57</b>	<b>76</b>	<b>60</b>

Source: Chair survey – 405 full-time faculty members, 29 S&E departments: 1 missing value for named chair, 1 missing value for admin.)

Referring to the above table, it is evident that:

#### **Endowed Chairs/Professorships**

***(H. # and % of women S&E faculty in named chairs)***

9% (8 out of 87) of the full time, university paid, women faculty are named chairs, compared with 14% (49 out of 346) of men

#### **Participation in Promotion and Tenure Committees**

***(I. # and % of women S&E faculty on promotion and tenure committees)***

19.5% of full time, university paid, women faculty serve on their departmental P&T committees compared with 17% of men.

It is important to note that these P&T Committee numbers do not reflect departments where all faculty members are included in a department-level promotion and tenure committee.

### **Administrative Positions**

*(G. # of women scientists and engineers in administrative positions)*

10.3% of full time, university paid, women faculty hold an administrative position whereas 15% (51 out of 346) men do.

These numbers include two female department chairs, one in Neurosciences and one in Sociology.

### **Equitable Allocation of Resources**

#### **Compensation**

*(J. Salary of S&E faculty by gender, controlling for dept. rank, and years in rank)*

Since salary information is held confidential in our private university, and often the number of women in a department is small (i.e., 1 or 2), by reporting this indicator (with appropriate controls) we may inadvertently reveal the salary paid to a female faculty member. Thus we have chosen to report this information for now by school only.

Salary, standardized to a 9 month scale

		<b>F</b>	<b>M</b>
<b>Arts &amp; Sciences</b>	<b>Instructor</b>	\$39,778.27	\$52,325.00
	<b>Assistant Professor</b>	\$52,248.54	\$51,706.35
	<b>Associate Professor</b>	\$63,837.80	\$64,392.59
	<b>Professor</b>	\$88,943.10	\$91,743.62
<b>Engineering</b>	<b>Instructor</b>	--	--
	<b>Assistant Professor</b>	\$69,279.50	\$72,053.92
	<b>Associate Professor</b>	\$80,415.00	\$80,449.96
	<b>Professor</b>	\$102,668.67	\$106,633.18
<b>Management</b>	<b>Instructor</b>	--	--
	<b>Assistant Professor</b>	\$94,347.78	\$90,805.31
	<b>Associate Professor</b>	\$100,102.20	\$103,391.43
	<b>Professor</b>	*	\$131,851.92
<b>Medicine</b>	<b>Instructor</b>	\$45,808.06	\$42,335.20
	<b>Assistant Professor</b>	\$47,356.28	\$55,347.42

	<b>Associate Professor</b>	\$65,765.80	\$66,128.19
	<b>Professor</b>	\$85,486.39	\$105,460.33
<b>All Schools</b>	<b>Instructor</b>	\$44,085.26	\$43,445.18
	<b>Assistant Professor</b>	\$63,306.72	\$64,026.84
	<b>Associate Professor</b>	\$74,463.09	\$76,230.12
	<b>Professor</b>	\$90,108.32	\$104,736.05
<b>Combined Ranks</b>		<b>\$71,116.02</b>	<b>\$87,844.82</b>

Source: Institutional Research – Human Resources

Note: This is preliminary data, pending further analyses

\*We are unable to provide this data. There is one full professor in this category.

### Space Allocation

*(K. Space allocation of S&E faculty by gender, with additional controls such as dept., etc., baseline and year 5)*

#### Office and Lab Space

Average Office/Lab Space (sd in parentheses)	Office Square Ft.		Lab Square Ft.	
	F	M	F	M
<b>School</b>				
<b>Arts &amp; Sciences</b>	187 (49.0)	216 (73.2)	856 (605.2)	1186 (937.1)
<b>Engineering</b>	235 (99.5)	223 (89.1)	1204 (945.9)	1342 (1012.5)
<b>Management</b>	143 (13.6)	142 (14.9)	n/a	n/a
<b>Medicine</b>	124 (80.1)	127 (52.5)	669 (328.5)	753 (316.2)
<b>Overall Avg.</b>	<b>172.25</b>	<b>177</b>	<b>909.67</b>	<b>1093.67</b>

Source: Chair Survey

Note: This is preliminary data, pending further analyses

No clear trend currently emerges from the office space information collected to date. Women in all schools have smaller lab space on average, with quite a bit of variability in lab space occurring overall, especially in engineering departments, where lab space ranges from 103 to 4,879 square feet.

Faculty members who had no office space were not factored into these averages. In Arts & Sciences, lab space for 6 individuals, 2 women and 4 men, is currently missing. These missing data points are all within a single department, and may in fact be zeroes. In the school of engineering, 27 faculty members have office space, but do not have lab space, and all are male. Faculty in Management do not have labs. In Medicine, 17 individuals do



not have lab space, 6 women and 11 men. It is noteworthy that 9 of these individuals also do not have office space within the school, thus may have offices elsewhere and/or are likely secondary appointments. Of these 9, 3 are women and 6 are men.

*Additional measures* – Measures of workload by rank and school for full-time faculty, including students taught and advised, committee service, and graduate student and postdoc supervision was collected in the chair survey and will be analyzed for next year's report.

### **University Climate and Community Survey**

As a joint effort of the University Resource Equity Committee and the Case Accreditation Subcommittee, an online, confidential survey on university climate and community was administered in May 2004 (see Appendix 3). The study's purpose was to examine the quality of the university's academic community and its impact on the experience of being a faculty member at Case. Specifically, the study aimed at examining faculty engagement, motivation, and commitment; access to academic resources; and other academic career development issues. Consistent with the goals of the NSF ADVANCE award, an additional aim of the study was to undertake research that contributes to the development of an academic environment that increases the inclusion of women and minorities at all levels of faculty and academic leadership through illumination and transformation of institutional practices, policies, climate, and culture.

Items were based in part on the results of the focus group investigation of Case faculty members conducted in Spring 2000. These issues were included in the survey to quantitatively ascertain campus-wide perceptions of community, culture, academic resources, and gender equity in the Case community. Questionnaire items were also modeled after several existing public-domain faculty climate surveys, including those from Purdue, University of Kansas, The Higher Education Research Institute Faculty Survey, The University of Arizona's School of Medicine's faculty advancement survey, and a climate survey from the University of Michigan's ADVANCE program. Additional global satisfaction items were constructed, along with demographic questions about professional/tenure and domestic status.

The survey is appended, together with preliminary results about the response rates and analyses of the quality of responses received.

#### *Response demographics*

23% of full-time faculty from the mailing list responded, for an N of 508 (full-time faculty comprised 89% of the responses).

## Rank and Gender information

<b>University Full-time Faculty Response Rate</b>	<b>University</b>	<b>Sample</b>
<b>Professor</b>	29%	35%
<b>Associate Prof.</b>	22%	27%
<b>Assistant Prof.</b>	37%	26%
<b>Instructor</b>	9%	7%
<b>Lecturer</b>	2%	2%
<b>Visiting</b>	2%	2%
<b>Research Prof.</b>	0%	0%
<b>Female</b>	31%	40%
<b>Male</b>	69%	60%

Full professors and Associate Professors were more likely to respond to the surveys than were Assistant Professors. In addition, women were more likely than men to complete the survey.

### *Response Quality*

<b>Response Quality: out of 155 survey items (Q1-Q11)</b>		
<b>Very good</b>	> 95% complete	447 (88%)
<b>Good</b>	92 – 94.9% complete	26 (5%)
<b>Poor</b>	< 92% complete	35 (7%)

We are currently in the process of analyzing this survey data and will release a report by the end of Summer 2004.

## **ACES Interventions Data Collection**

### **Overall Intervention Baseline**

Baseline data questionnaires were administered to women faculty and chairs of the 4 test departments as pre-intervention measures. Although each of the specific department-level ACES interventions (coaching, mentoring, networking, and training) will receive individual evaluation, we thought it important to determine overall how successful the ACES interventions are as a group to women faculty and chairs. In particular, the constructs captured in this questionnaire were as follows: For women faculty: clarity and efficacy of career goals, actions to further career goals, mentorship received and provided, control over work and life priorities, influence and success, satisfaction. For chairs: clarity and efficacy of career and departmental goals, actions to further career and departmental goals, mentorship provided, control over work and life priorities, influence and success, satisfaction.

IRB permission was sought and received to conduct these questionnaires. Voluntary responses were received from 12 out of 16 women faculty (75%) and 3 out of 3 chairs (100%) of test departments. One chair was not included in any of the intervention activities or baseline evaluations since his appointment was still pending at the time of administration of the

evaluation. The questionnaires are appended (see Appendix 4), together with summary information about the results.

At the end of the one year period from the beginning of the ACES interventions (i.e., December 2004), post-intervention measures will be conducted to measure gains from the programmatic interventions.

#### Women Faculty (Test Departments) Receiving Coaching - Demographics

S&E Women Coaching Participants - Demographics	N			Average Yrs. Current Rank	Average Yrs. Institution
	Tenured	Tenure-track	Non Tenure-track		
<b>Instructor</b>	0	0	3	.7	7.3
<b>Assistant Prof.</b>	0	4	1	3	4.3
<b>Associate Prof.</b>	4	1	0	6.3	9.3
<b>Professor</b>	2	0	0	5.5	10.5

Source: Chair Survey

#### Department Level Executive Coaching Evaluation

To determine the effectiveness of the executive coaching intervention, mid-term evaluations have just been conducted with women faculty on completion of their third (out of 6) coaching sessions. A similar evaluation will be conducted for chairs on the completion of their sixth (out of 12) coaching sessions. The main constructs being evaluated are a coach's assistance in providing insights into career and performance issues, creating a career/leadership development plan, and utilization of an effective style and approach. Open ended questions were also asked seeking descriptions of the overall coaching experience.

The questionnaire is appended (see Appendix 5). Summary information about the responses received to date is being calculated at present.

#### Neurosciences Department Case Study

A case study on-site in the Neurosciences department is in progress, as a component of the ACES project. This department has a history of strong participation and advancement of women faculty. The guiding question of this study is, "How is an engaging, productive department, which is inclusive of women and men, established developed and maintained?"

The case study research approach employed in this study utilizes collection of data from multiple sources, including existing documents, direct observation, interviews and a survey. The resulting data will be analyzed for themes and concepts to develop theory about the creation of productive, engaging and inclusive work environments.

Work on the design of the department case started in January 2004. Since then, the research design has been completed and IRB approval has been obtained for the project. On site data collection began in June. To date, fifteen interviews have been completed with primary and secondary faculty and staff and surveys have been collected from all interview participants

except one. Additionally, nine direct observation activities have been completed. Based on department member schedules, all interview and observation activities are anticipated to be complete by the end of September. A summary of this study and its related measures is attached (See Appendix 6)

## **Research and Evaluation Plans for Year Two**

### **Continued and Expanded Data Collection and Analyses**

(1) Test Departments:

(a) Administration of post-intervention evaluations for all interventions as a group (comparisons with baseline data for women faculty and chairs) - ***December 04 for women faculty, April 05 for chairs***

(b) Administration of evaluations of coaching and mentoring interventions (women faculty and chairs) - ***October 04 for women faculty, February 05 for chairs***

(2) 27 other S&E Departments

(a) Administration of baseline (pre-interventions) data collection instrument (women faculty and chairs) – ***January-February 05***

(b) Administration of mid-term evaluations of coaching and mentoring interventions (women faculty and chairs) - ***July-August 05***

(3) Other evaluations

(a) Administration of evaluation of executive coaching experience by deans - ***December 04***

(b) Evaluations of specific ACES activities (e.g., Provost's retreat, networking seminars, women faculty luncheons) - ***As occurring***

(c) Collection and analysis of non-perceptual data regarding faculty resources and expectations (Chairs' Questionnaire) - ***February-March 05***

(4) Neurosciences Department Case Study – ***Fall 04/Spring 05***

(5) Start-up Packages (Analysis of Offer Letters) - ***Fall 04***

(L. Start-up packages of newly hired S&E faculty by gender, with additional controls such as field/dept., rank, etc.)

To date, 34 start up letters from 2003-2004 have been obtained from the University administration and the process of reviewing these data has begun. The wording in start-up packages at this institution is not completely standardized across colleges, although the packages are similar in structure. Some of the colleges are less specific than others in areas where it would be preferable to have "hard" numbers to assess (i.e., quantifying an offer), so assistance from the university's institutional research office is being provided to help quantify these data for comparison. Institutional standardization of start-up wording is being discussed as a means of enabling retrieval of more accurate information on equipment costs, space (square footage), numbers of paid graduate assistants provided, and facilitating comparisons across departments.

#### (6) Exit Interviews – *Fall 04-Spring 05*

An in-person Faculty Exit Interview has been developed and will be implemented beginning in the Fall of 2004. An alternate paper/online Faculty Exit Survey has been developed in the event that a Faculty member is no longer physically available to the interviewer. A secure online version of the Faculty Exit Interview is being implemented, with separate secure databases for identifiers and content, to be available in the Spring of 2005. This online version will not replace the in-person interview, but will provide an alternative for faculty who may not want to or are unable to participate in an in-person interview.

The exit interview was developed through careful review of the Case Climate and Accreditation Survey, the NSF indicators for ADVANCE, and the already developed survey instruments from NMSU, Kansas State, and Virginia Tech. The Case Faculty Exit Interview questions focus on three areas, 1) Reasons for Accepting the Position at Case, 2) Rating Your Experience at Case, and 3) Reasons for Leaving your Position at Case.

The information will be used by the Office of Equal Opportunity and Diversity to identify areas for improvement and trends in attrition. It has also been suggested by a fellow ADVANCE colleague that a repository for exit questions be created that ADVANCE institutions can use to develop their own instruments. This would include a certain number of agreed upon "common" questions for the 19 institutions.

Additionally, second year interviews with women and minority faculty will be conducted by the Faculty Diversity Officer. The purpose of these informal interviews is to identify the challenges that new women and minority faculty face, and to develop ways for those challenges to be addressed. The goal of the undertaking is two-fold: reducing the attrition rates and actively monitoring and improving the climate for women faculty and faculty of color.

#### (7) Climate Survey Analysis - *Summer and Fall 04*

Detailed description of the results will be presented in a report due at the end of summer, and further academic analyses will be conducted thereafter.

#### (8) Salary Study - *Fall 04*

The next step in assessing salary equity will involve a multivariate analysis of possible gender bias in current rank and in faculty salaries. The methodological approach outlined in *Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty* (2<sup>nd</sup> edition, 2002) developed by the American Association of University Professors will be employed for this purpose. The Paychecks protocol recommends two separate analyses: (1) a multiple regression analysis of salary data for the total population of faculty and (2) a categorical modeling or event history analysis of academic rank. Understanding potential gender bias in academic rank is necessary in interpreting the results of salary estimation equations that incorporate rank as a predictor variable. As the authors emphasize, if gender differences in both current rank and time to promotion are the result of discrimination, including rank in equations predicting salary can underestimate the extent of bias. Using the Paychecks methodology will enhance the comparability of results at Case with those of comparable institutions.

During Year II of the Advance Award, there will be a focus on replicating the analyses outlined in the Paychecks guide, including the list of recommended variables and addressing distributional and other complexities the authors raise. On the basis of these initial results, of the insights drawn from the qualitative data analysis, and of suggestions from published research and reports from other ADVANCE institutions, we will also begin developing a causal model of salary determination of faculty at CWRU. This hypothesized causal model will guide continued quantitative data collection and analysis in subsequent years. The ultimate goal of this study is to estimate the coefficients in our elaborated model using structural-equation modeling techniques.

APPENDIX 1: Chair Survey

**Departmental Faculty Questionnaire**  
**Department of**

Please fill in data for the current academic year

Subject Code	Rank	Tenure Status (a)	Years in Current Rank	Full/Part Time	Gender	Minority (Y/N) (b)	Years at CWRU	Administrative Position (Y/N) (c)	Named Chair (Y/N)	P&T Cmte. Member (Y/N)	# of Dept/ College/ Univ Committees	Total Office Space (Sq. Ft.)	Total Lab Space (Sq. Ft.)	# Lecture Credit Hours Taught	# Lab Credit Hours Taught	# Students Taught	# Undergrad Students Advised	# Grad. Theses Supervised	# Grad. Thesis Committees	# Postdocs Supervised	A.Y. Salary (\$)	Length of Contract (d)	% Soft Money	Summer Salary (\$)	# Months of Summer Salary	% Soft Summer Salary	

(a) T=tenured, I=in track, N=non-tenure track  
(b) If yes, please indicate: African American (AA), Hispanic (H), Asian or Pacific Islander (AP), Native American (NA) or Alaskan Native (AN)  
(c) If yes, please specify the position held  
(d) Specify 9/10 or 11/12 month contract



## APPENDIX 2: Focus Group Report

# **Resource Equity at Case Western Reserve University:**

## **Qualitative Baseline Data Report**

CASE Resource Equity Committee  
NSF ADVANCE Evaluation Team

19 July, 2004

**Committee members:**

Diana Bilimoria, Organizational Behavior  
Patricia Higgins, Nursing  
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## INTRODUCTION.

This report summarizes findings from focus group and individual interviews conducted at Case Western Reserve University (Case) in early Spring 2004. The purpose of this study is two fold. First, it seeks to establish baseline qualitative data about the experiences of women faculty in 4 test departments for the NSF ADVANCE program and, secondly, to extend and verify whether conditions and results observed in a prior wave of focus group data collection still exists.

The current study is the second phase of a three-phase project initiated by the University Resource Equity Committee (REC) in 2000. The REC was commissioned by the University Provost at the recommendation of the Faculty Senate and was charged to design and implement a study to investigate the academic resources available to faculty on Case's campus. Phase I used purposive sampling to convene focus groups interviews, from which the REC garnered baseline perceptions and experiences of participants concerning the distribution of departmental and university resources by gender, and the barriers, both formal and informal, that faculty encounter in their careers. For the complete report go to <http://www.case.edu/admin/aces/resources.html>. Phase II obliges the REC to repeat analyses conducted in Phase I of both quantitative faculty salary studies and qualitative focus group analysis.

During the three-year interim between the first and current waves of data collection, findings from the REC committee's report were instrumental in Case's pursuit and attainment of an interdisciplinary NSF Transformation Award. This award, the NSF ADVANCE grant, promotes gender equity for women in science and engineering fields of academia. The current study acts as a baseline data collection for the NSF project, while also serving to extend and confirm findings from the first round of focus groups. A third, and final phase of data collection and analysis will take place in 2007, which will identify and assess improved experience and access to resources for women faculty at Case.

The following report will identify areas of overlap between the two data sets, as well as areas of divergence. Four pilot departments participated in the current focus group interviews: physiology and biophysics, chemistry, organizational behavior, and mechanical and aeronautical engineering. We conducted three focus groups: one for mixed rank female faculty, one for mixed rank male faculty, and a final focus group for department chairs. Additional individual interviews, following the same protocol and script, were offered to faculty members whose schedules conflicted with the timing of the focus groups.

Analysis of the transcribed data was conducted by members of the ADVANCE / REC research team. We have organized our results in terms of three broad categories: department and school culture, University culture, and the culture of academia. Within categories, we discuss emergent themes from our current focus group and individual interviews and include direct quotes from the transcripts so our respondents are able to speak for themselves.

## STUDY DESIGN AND DATA COLLECTION.

A total of three focus groups were conducted in early Spring 2004: one focusgroup of mixed rank women faculty, one of mixed rank male faculty, and one of department Chairs. The focus groups ranged from 3 to 9 participants and were audiorecorded. Participants in these groups were encouraged to act as Key Informants, relating not only their own experience but also that of colleagues at Case.

Among the 4 test departments, there are a total of 97 primary faculty members; 20% is female (N=19) and 80% of this sample is male (N=78). Overall, we had 23 faculty members participate, for a response rate of 24%, with 47% of the female faculty members participating, 19% of the male faculty, and 100% of the department chairs participating. The data collected from our respondents resulted in 11 hours of audio-tape and 80 pages of transcribed text.

Initially, 17 people participated in formal focus group interviews, for a response rate of 18%. One focus group was comprised of junior and senior female faculty members (N=5; 47% response rate), the second included both junior and senior male faculty members (N=9; 12% response rate), and the third focus group consisted of 3 department chairs (75% response rate). The result was approximately 5 hours of tapes, yielding 38 pages of transcribed text.

Suspecting that faculty members' schedules were influencing our participation rates, we contacted test department faculty, offering individual interview opportunities. Through these means we obtained an additional 6 male faculty members, for a total of 15 male participants. We also interviewed the 4<sup>th</sup> and final department chair, resulting in a 100% response rate.

The individual interviews provided a supplementary 6 hours of tape and 42 pages of transcribed text. Thus, the overall response rate was increased to 24%, which included 19% of the male faculty members from our test departments participated, 47% of the female faculty members from the four departments, and 100% of the department chairs. We obtained a total of 11 hours of audio taped interviews and 80 pages of transcribed text. We are unable to provide additional descriptors for participants without compromising assurances of confidentiality that were part of our IRB protocol.

REC research team members moderated the focus groups, based on training by Eleanor Stoller, Ph.D., a co-investigator on the NSF ADVANCE grant, who teaches a graduate seminar in qualitative Research Methods and uses focus groups in her research investigations. For each group, a second research team member served as a facilitator, recording observations regarding group dynamics, making conversation notes to guide transcription, and monitoring recording equipment. The interview guide for the focus group sessions consisted of seven questions, which sought respondents' perceptions of the different experiences of male and female faculty at Case. To see the complete interview guide, please refer to Appendix 1.

At the end of each focus group, each participant was provided with a note card, which asked that they "Please summarize your experiences as a CWRU faculty member in one word or phrase." To see responses obtained from the note cards, please refer to Appendix 2. The focus groups and

individual interviews were tape-recorded and the transcripts were then analyzed, using standard methods of content analysis.

The procedure consisted of team members initially reading each transcript individually, identifying distinct comments and keywords. The team then met to discuss each transcript in depth, comparing keywords, themes, and categories from the current data to the REC Committee's code from the first phase of data collection in 2000. Areas of agreement as well as divergence were identified. It is noteworthy that the Phase I REC code was not referred to immediately to allow for new themes to emerge if present.

Five overarching themes were communicated across our male and female participants:

1. Proportional rarity of women is an issue at Case.
2. Female faculty members deal with token dynamics associated with being a statistical minority.
3. The academic environment is structured by rank and gender, advantaging men's careers.
4. Women perceive their rarity as a disadvantage. Men agree with this perception but also view it as a potential advantage or opportunity.
5. Case, as an institution, is resistant to change and improvement efforts.

These themes were evident at multiple levels, including home departments and schools, the University, and academia as a whole. Our results are thus organized below following this template, providing direct quotes from our respondents to best illustrate how these themes are manifested and experienced at Case.

It is noteworthy that the ADVANCE program's interventions had not been initiated during either the first or second waves of data collection. However, as a result of the release and dissemination of REC committee's initial findings, Case implemented positive change toward obtaining and sustaining gender equity on campus:

1. The Case Western Reserve University Women's Center was established.
2. A Faculty Diversity Officer was added to the Human Resources Department.
3. REC Committee findings were instrumental in Case obtaining the NSF ADVANCE grant.

## RESULTS.

After combing through each of the three focus groups and the individual interviews, we concluded that the themes and codes that emerged from Phase I of the REC Committee's focus groups largely capture the current experiences of faculty in the four test departments. There are, however, themes from the original coding which were not addressed by current participants. In addition, other themes, which had not been of primary importance three years ago, received quite a bit of attention in the current sample. Both of these differences are potentially explained by the difference in sampling procedure, sample sizes, and the passage of four years' time. In 2000 the REC Committee focus groups utilized purposive sampling, identifying potential respondents who were defined as key informants on issues relating to gender. While these issues also characterize academe as a whole, our focus will be on local levels amenable to intervention by the NSF ADVANCE project.

### *1. The Culture of the Department or School.*

#### *a. Proportional Rarity of Women in the Department or School:*

Participants in all groups referred to the lack of a critical mass of women faculty, which affects work load and both formal and informal interaction. One male faculty member said:

“I'm not very aware of women's voice[s], colleagues' voices. ... I think we've maybe had one woman candidate in a dean search. We've had one woman associate dean and no chairs that I'm aware of, so far. In the “hierarchy” and particularly in the appointments committee, it's still very male dominated.” *Male*

Another male faculty member observed, “Women, until recently in our department, have been the minority, so there's the minority / majority difference that can be pretty powerful.” An aspect of the low density of women on campus is the high amount of committee work female faculty members across ranks are asked and required to do.

A female respondent reported, “Because I'm a woman, I spend so much time serving on committees.” A male colleague concurs, “...Because there are less women and because, to provide a balance, you'd like to have women on committees... maybe it's not a 50/50 population [so] they tend to get asked to do more things.” A second male faculty member commented on the committee work load of his female counterparts:

“[Women are] tapped for a lot more committee assignments, sometimes because you want some gender representation. ...The work load can be higher, sometimes, if you only have a limited number of, you know, that could be for either race or gender, or age distributions... So I think that, that is one, perhaps unintended, but I think it is a de facto consequence.”  
*Male*

The proportional rarity of women in faculty positions is also acted out through the absence of collegial relationships among women and networking through informal relationships that could potentially reduce feelings of marginality (“other-ness”).

“We walk into a faculty meeting and see a sea of male faces. None of them have had the experience of dressing and sending off their family that morning. I’m not knocking them, they just don’t know what it’s like.”

*Female*

The impact of a scarcity of female faces in the classroom and departments impacts students as well as faculty. Female students at Case tend to look to women faculty as potential role models, mentors, or advisors. A male respondent argues that the dearth of female faculty members sends a negative message to our female students:

“I mean, you’ve got 60% of the students are women, and then if they only see that [there’s only one PI] in the department [who] is a woman... I mean whether that’s an overt or subconscious message to them, [it says] it’s gonna be hard to proceed through the ranks... It’s gotta be scary.”

*Male*

A second male respondent adds to this comment, saying:

“The female students have brought it up with me several times, like, ‘What the hell is wrong with this place?’ So, they’ve definitely noticed [the scarcity of women faculty].. and that’s a problem.” *Male*

A third participant adds to the conversation:

“I would tend to agree. I would think rather than seeing it as an opportunity, [female students] might see it as an environment that they wouldn’t feel very comfortable. *Male*

*b. Token Dynamics in the Department:*

The scarcity of women faculty at all levels results in pervasive token dynamics of the following forms. Women faculty described heavier workloads, including responsibilities that impinge on research time and are often considered “invisible” work: advising students; mentoring junior faculty; administrative departmental work (e.g. maintaining the department web page); and service assignments (e.g. attending open houses and serving on student committees). In addition, women feel that they carry a disproportionate share of the committee work, which are not positions increasing professional status, as committee assignments are perceived to reflect a gendered process, in which women are assigned to less powerful and less visible committees.

Untenured women, in particular, find it difficult to refuse administrative and service responsibilities when asked by senior faculty or administrators, even when they realize that accepting these responsibilities will detract from the time available for their research.

Respondents in our women’s focus group cited requests for them to help with “un-official” work in their departments as one of the differences in experience between male and female faculty

members. One participant in our women's focus group stated, "...There is much unofficial service work on many levels. Undergraduates and graduates both seek me out with questions, even ones not in my department."

Another female participant states, "I feel like I do a lot more service... I help with recruitment, the department web page." Another female respondent spoke to the invisibility of the things she finds herself spending time on:

"...It seems like I have a lot of graduate students and post docs who come to me with questions or needing to be mentored. You don't get a lot of official credit for it (towards tenure) because it's confidential, you can't talk about it." *Female*

Paradoxically when there are too few women, they perceive that they concurrently stand out (are extremely visible and constantly scrutinized) while at the same time being overlooked (excluded from power networks). A second facet of token dynamics, mentioned across both male and female respondents, concerns the exaggerated inclusion of women, but in social interactions, rather than in power networks. One respondent commented:

"As far as the group that goes to lunch, we make every effort to make sure we invite the women faculty to come. ... If anything [our female colleagues are] getting assaulted a little bit too much to be included in things, because everybody's trying to make sure that we're... being fair." *Male*

Token dynamics may take the form of preferential social and cultural norms. A female participant referred to the patterns of socializing among her male counterparts:

"In my department, [when] all the men play [sports]... I'm not involved. When my colleagues play [sports], they get to know each other as humans. We're excluded from networking... There's a men's room barrier. You can bridge it to a point, but not completely." *Female*

A male supports the previous quote, reflecting:

"There are probably all kinds of norms or customs that make, that would make a woman, a woman faculty member, feel a little bit more like a stranger. I don't know about Case in general, but I know for years here, when I first came, you know, we'd have [sports] outings. So it's an ease of connection. There are poker games with people that have been going on for 20 years. Those are more around friendships than about the University, but they kinda start with ways men connect." *Male*



A third characteristic of token dynamics is apparent when women faculty members are seen as representative of their gender, becoming a symbol or stand-in for all women. One female respondent said:

“When women’s issues come up, I get comments directed toward me that I have to respond to, both positive and negative. Then I get comments about whether I should really be involved with these issues, and put myself out there like that.” *Female*

Serving as a representative for the entire gender group is not something only observed by women. A male participant, and a former department chair, supports this notion:

“I made a push to see if we could...significantly change the gender balance in the department, it was interesting because at least my thought was if you hire [only] 1 woman, that woman becomes the representative for all women in the world, and that just won’t work out.” *Male*

*c. The Gendered Profession in the Department:*

As a social institution, many aspects of academia are underpinned by assumptions about who is filling the professional roles. These subsuming notions are preferential to men. One of our male participants highlighted differences in working hours “acceptable” for male versus female faculty.

“You take a job like this, in a male dominated profession... there’s a lot of us working late in the office, coming home at odd hours.” He went on, referring specifically to pressures faced by a female colleague who’s recently had a baby, “She can’t just work late here after hours, she just can’t. Whereas it’s more acceptable for a husband to say, ‘Well I can’t come home, I’m working.’ If mom does that, that’s bad, just because the way society is set up.”

Moreover, attempts at integrating work and family responsibilities poses additional challenges to women faculty. One female respondent commented directly to the tension between work demands and family time:

“I have young children, so I’m hesitant to consult, and that reduces funds I could have for graduate students to work as RAs on my projects. We have to fund those ourselves. I can fund someone for a while, and then they move on to something else. I don’t get to work with RAs for a long time because of that.” *Female*

Another example of the gendered nature of the profession is the scheduling of classes and faculty meetings, which can be problematic for women with young families. One woman noted, “It wears on you... Why are seminars 4:30-5:30?”

*d. The Myth of Women’s Advantage in the Department:*

Although men generally agree that women are disadvantaged members of the Case faculty, they also perceive minority status as a potential advantage in terms of increased access to resources or

opportunities. The myth of minority advantage that bends in the direction of women is expressed in several comments:

"...My impression is, in this department, being male or female makes almost no difference, in fact it may be even easier to get access to resources...but I think it is the chair's opinion is that there is absolutely no bias, even if that means going beyond equity." *Male*

"We are very sensitive to make sure that salaries are fair. If anything, we're going to err, we're going to err and make sure that the women's salary is above or greater than contemporary, or a commensurate male." *Male*

"... Now there's a little resentment by the male faculty. Just a little resentment." *Male*

"But the male faculty that came in who now see the start up packages being offered to the more recent hires who happen to be women, are, there's always this, "I didn't get that much, I could have gotten more, I should have asked for more," you know, it isn't gotten unpleasant, it' just there's awareness. Very, very much awareness." *Male*

In spite of these perceptions, one male faculty member spoke against the myth of opportunity in being a statistical minority:

"...My gut response to that would be that [women are] not in it to try and take advantage of some sort of quota system. [Women] feel like they can be good at it and they want to make it, based on the same [criteria] without having to take advantage of anything like that." *Male*

## 2. Culture of the University.

### a. Proportional Rarity of Women at Case:

A respondent described how effects of women's proportional rarity on campus goes beyond departmental interactions. Concerns with gender balance on University committees also adds to the demands on women faculty members' time:

"Basically, I mean and this *doesn't* come out of the department so much, the president's office says, 'We want you to be on this search committee,' or 'we want you to be on the president's search committee, we're searching for a president for this university and we would like you to be on it.' The person says, 'God, this is such a prestigious thing to be asked to do. I really want to do it [because] I'm so busy with my research,' and I say, 'Don't do it.' But they ended up doing it because the president or somebody writes a letter saying 'I want you to be on this search

committee.’ And if they’re the only woman they’re going to be asked a lot to fill roles like that.” *Male*

*b. Addressing the issue of proportional rarity: Unintended consequences*

One of the explicit aims of the ADVANCE study at Case is increasing the number of women in science and engineering fields. By improving the University’s academic culture and policies, more women may be recruited and retained. One of the anticipated consequences of more women faculty, especially in senior positions, is that a shift in culture will take place, influencing and improving the University’s infrastructure, and policies, while also supporting a more equitable environment.

Although these outcomes are viewed as being largely positive, some participants highlighted potential unintended consequences of some of the interventions and policy changes recommended by the ADVANCE study. A respondent discusses the impact of bringing in outside women as full professors or chaired professorships:

“It’s my understanding that there’s a move afoot to... find resources to hire senior tenured, full professors as chair that are women. I think that is a mistake. Women faculty, who are presently on this campus...have essentially earned the promotion, and in some cases a chaired professorships. They’ve paid their dues, they’re loyal, they’ve worked here, they’ve done well, they’ve done everything expected of them. ...Elevate *them* to the chaired professorships. I know the effort is emphasizing and increasing the number of women on campus... I want to bring in women at the assistant associate level, but I want to promote. ...In my own department it would actually be a morale problem to bring in a woman from outside and give her a chaired full professorship... when there’s somebody... right now who deserves [it].” *Male*

Another example of an unintended consequence associated with the recruitment of senior women deals with the inclusion of spousal hiring as part of a competitive start-up package. Several respondents mentioned the need for increased attention to this aspect of Case’s recruiting efforts, some suggesting Case should be more aggressive in offering positions to spouses and partners of candidates, while other respondents suggested spousal hiring may in fact un-do efforts of the ADVANCE project.

“... You could make an offer to the male spouse of a female candidate that you really want to recruit, but by making that offer to the male spouse... you might be cutting off another female faculty position.” *Male*

A third unintended consequence associated with the ADVANCE project at Case was raised regarding the professional development interventions offered to female faculty, such as coaching, mentoring, and network building. One participant specifically suggested that by not including other minority groups in these activities, a perception of exclusion was being

perpetuated. The respondent encouraged the ADVANCE team to consider expanding the project to include other groups of the campus population, such as racial minorities.

“I [support] this whole initiative about potential disparities or ways to increase equity and representation, opportunities for advancement and enhancing overall experience. I would suggest that the same need exists beyond the scope of [women]. The same needs exist for other minority groups, other than that based upon gender. It raises interesting concerns [for] other minority groups. As I begin to hear about things like the mentoring that is made available for... women, then as another minority group member, I think, “Wow... this is something I could use, this would be great if I could have this mentoring network, mentor committee.” I think that [racial] minority faculty members... have as much of a need for that kind of thing. It actually sets up a condition... worse than it was in general before, because now there’s a sense that there are these resources available that you’re not being allowed to tap into.” *Male*

*c. Gendered Profession at the University Level:*

Questions about integrating work and family responsibilities generated a number of concerns that illustrate the ways in which routine policies and practices privilege men whose wives who assume responsibility for unpaid family work. Discussions of work-family conflict most often emphasized university policies and academic culture.

Regardless of gender, a number of participants argued that family responsibilities compete with the productivity expectations of academic careers. An example comes from one faculty member participating in the Men’s Focus Group:

“Well the culture is for faculty to put in full time, and *then some*, in their research, so that obviously is a pressure for anyone who has a family.”  
*Male*

While recognizing that family demands impact both men and women, most participants agreed that women carry a greater burden of family responsibilities than men. For some, this gender difference was seen as inevitable.

“I think it’s clearly the case, at least in my family. My wife took care of my, both children, cut back her working hours. It was a basic decision, you know, when you pursue careers.” *Male*

Although family responsibilities are most prevalent in the early (pre-tenure) years of an academic career, when families are most likely to be caring for very young children, demands for care continue across women’s lives. Specific mention of child and elder care was made in both the focus group and individual interviews.

“On a more comfort level, do we have any facilities here for childcare?  
Why not?! Why not?! It’s an absolute must An absolute must, just to

relieve the pressure a little bit. There's *no* reason not to have child care... There are some little things that can be done." *Male*

Backing this opinion, one of our male participants provided further comments on issues of work and life integration, highlighting these issues span academic and life stages:

"There are a bunch of different dimensions... One is family issues, which is the fact that no matter how liberal or progressive people... are... the female who is the mother, is the one who spends more of the time taking care of any children, elderly parents, family responsibilities. It's almost impossible for me to conceive of this as being a family-friendly, gender-neutral institution of work without some form of childcare. It just doesn't work. It hurts the women much, much more than the men. ... You've got to attend to that. It's got to be done." *Male*

A male faculty member compares previous positions to his experiences at Case:

"I worked at [universities]... all of them had subsidized on-site daycare and places really should have it. ...How can you expect to recruit women and retain them if you don't offer a standard of assistance?" *Male*

Another male respondent in a focus group interview reiterates these views when asked for closing thoughts:

"Just to reiterate the lack of childcare on campus, I think it should be fixed, pretty simple. It should be subsidized... for faculty. It should be there." *Male*

Although work-family issues dominated discussions of faculty careers as gendered, participants also addressed other differences. For example, regarding interaction styles, several participants pointed to other ways the everyday aspect of the academic profession is gendered. Respondents mentioned women's lack of skill with negotiation and how this impacts whether or not they initiate side deals, better start up packages, reduced teaching loads, better lab spaces, and so on. Women are not socialized to successfully negotiate for better deals. A male respondent discussed the difference in socialization between women and men:

"I've spent my life learning how to interact and relate to men, from the sports field to the classroom. I think if you look at any interaction, whether it's one-up-man-ship or making an argument that gets you something that you want, that the other person doesn't want to give up, there's a certain way you go about it, the postures. But it's not necessarily a skill women learn at an early age. It comes secondary." *Male*

A female participant agrees. She asserts:

“[Side deals] involve skills women maybe aren’t good at: negotiating skills, influence skills. It may come more naturally to men, or maybe they have fewer hurdles to cross. *Female*”

*c. Case, as an institution, is resistant to change and improvement efforts:*

The larger culture of academic institutions was seen to influence the everyday experiences of faculty at Case. Reflective of the larger world of research universities, teaching and institutional service at Case are perceived as being trivialized and devalued. Some respondents question the University’s commitment to issues of equity. Moreover, some respondents feel the driving force behind Case is the “bottom line.” Efforts to initiate change confront both an academic culture and a bureaucratic structure resistant to innovation. One respondent reported:

“I would say one of the single biggest things we’ve got to work against, in the sense that we’ve got a faculty that are supposed to be setting policy and doing things, [is] the bureaucracy that seems to be this huge, immovable mass.” *Male*

Following this sentiment, a second male respondent offered the following:

“I feel that... there is always some reason that things can’t be done, because it’s never been done that way, and I see this number of people involved in that capacity, growing year by year, eating up more and more resources. ... By and large they’re telling us why we can’t do things. I think that if you’re a, kind of a small, and flexible, more nimble, letting people follow their ideas, supported by bureaucracy, supported by a support staff that’s supposed to be enabling these things, instead of regulating and governing these things... there’d be more resources available [and] everything wouldn’t feel like a struggle. I think just the change in the culture and feeling, just how hard it was to make any progress.” *Male*

The ambiguity of the tenure process at Case is another institutional factor, specifically referred to, as an issue impeding the faculty’s capacity for innovation, achieving organizational goals, and developing the institution.

“There’s an equal opportunity for unhappiness with the tenure process right now and the lack of definition around [it].” *Male*

Many respondents described the criteria for gaining tenure and promotion as being unclear and unrealistic. Moreover, there is a pervasive sense that rules are not applied with equity across faculty. A senior male faculty member captures this when commenting on the difficulties of mentoring junior members of his department.

“There’s a lot of pressure to build up a research program.... Sometimes I think the goals, which are set by the administration, are somewhat

artificial and unrealistic, and very often are set by people who wouldn't be particularly able to do that themselves. I think that's probably a fair comment, that sometimes they're unreasonable, and sometimes I worry... well, how would you perceive it if I told you don't worry, the goals are unreasonable." *Male*

Another respondent speaks to his sense of incongruity between the University's goals and the criteria for promotion. He cites a number of cases in his college where decisions not to grant tenure were over-turned at the Provost level.

"The candidates I mentioned earlier, where the provost's office over-turned the school's, *our* school's decision, all in the cases of women, I think those have been great decisions. In [some] of the... cases, they are institution builders. They're leading very important programs. So, my question is what's going on in the system such that somehow our internal peer evaluation isn't matching up with what the university sees as valuable contribution?" *Male*

The elitist nature of the academic institution was brought out by some participants. We categorized these comments into four codes: the existence of a pervasive deference to rank within the hierarchy; too few women faculty members at the full professor rank and in high level administrative positions; rank privilege accrues to male faculty but not to female faculty; and diversity is not valued. The university itself was described as being a gendered hierarchy. The bottom of the hierarchy is more heavily feminine and the top of the hierarchy is much more masculine.

Participants referred to the deference given to high-ranking members: full professors have inordinate power and influence. Rank was determined to be more (or as) important a factor as gender in faculty-staff interactions and other university practices. Several participants paused after sharing an observation to wonder if the pattern they had discussed reflected female gender or junior rank. Participants in almost every focus group pointed to the lack of senior women and the consequences of this. A male faculty member observed of his school:

"We've had one woman associate dean and no chairs that I'm aware of, so far. In the "hierarchy," and particularly in the appointments committee, it's still very male dominated." *Male*

Another male respondent asserts:

"There's a lot of bias based on rank, and that interacts with gender unfortunately. It seems there are these rules about what's required for tenure. And for men, they seem to be bent, but for women, they're applied to the letter of the law. ...I've been on the appointments committee for 8 or 9 years, and this goes back a certain amount of time. It seems to me, when it's a woman all this stuff comes up. I remember a case where there was a gap in a woman's vitae in terms of professional experience... this

person was probably having a child or some “life thing”... and one person on the committee said, “Well, where *was* this person during this period of time? How come this period of time isn’t there?” And I’ve *never* heard this kind of thing come up for a man.” *Male*

A male participant discussed this trend:

“The campus still is top heavy with people 60-80 in age and sadly these are virtually all male with, I don’t even know if there’s an exception... basically, they’re so dominated by males and an anachronistic point of view. But you know, this kind of culture pervades this campus, and I happen to know because women faculty have told me how offensive they find that... frankly, I find it offensive. Considering the sources.” *Male*

Speaking directly to the power and influence of full professors, one of our male participants recalled situations where colleagues were being reviewed for tenure and promotion:

“There’s a smaller and smaller number of people who are making decisions, because only full professors can decide whether associate professors are promoted. So, in many departments that’s like two or three people, voting on one person... I’ve seen gender situations, in a number of cases, where an associate professor has a bad relationship with one full professor and that’s sufficient to make it impossible for that person to get promoted. And I just would guess that if you’ve got a full professor who somehow has some gender bias going on, that would make it tough.” *Male*

### *3. The Culture of Academia.*

While the five overarching themes were explicitly described in the settings of the department and University, specific mention of the same issues occurring across the academic environment was not as frequent. This can be related to the wording of our interview protocol, which intentionally focused respondents attention on their experiences and perceptions within their departments or primary units and at Case. However, some respondents implicitly referred to the relatively small numbers of women in the sciences and engineering at Case as being a reflection of their proportional rarity in the fields throughout academe. Similarly, issues of token dynamics in the academe were generally referred to, but not spoken about particularly. One theme which did receive quite a bit of consideration was the gendered nature of the academe and its expectations, culture, and values.

#### *a. The Academic Profession is Gendered:*

Several participants in our focus groups spoke the overarching culture of academia and noted ways in which men’s lives are privileged in this environment. For example, a male respondent, in an individual interview, observed the difference in experience when it comes to the daily duties and routines of academic work:



“I think the big difference is tenure. I think that’s the critical switch. I think if [women] can struggle with balance *and* be able to get tenure, I think it changes. But up until that point... I don’t think men can relate, because it’s not *just* balancing. I think the choice they have to make, just the choice of being with the children in particular or writing or being at work is a different kind of choice, than the male saying I might not be able to go to the kids’ concert.... it’s a different connection. That’s a tough balance choice, it was for me, but it’s just not the same.” *Male*

Another male participant argues that work-life issue, as illustrated by differences in balancing family responsibilities and work demands, is an issue saturating the academic environment.

“I think [imbalance exists] across academia. We depend on really getting grants, which means a full time job, otherwise you’re not competitive. So that’s really the question, the competitiveness, for me. Regardless if you put in less time, if you take a few of the same training and skills, it’s the time that counts.” *Male*

Referring to issues of childcare on campus, a male respondent argued the addition of such facilities would serve as a short term solution but would not impact the larger, systemic barriers to equity in academia.

“But even if you had a fully-functional day care facility... you’re not going to leave your kid in day care from 7:30 or 8 in the morning until 6 or 6:30 at night. That’s just not what happens. So, even with a daycare facility, there’s still gonna either have to be an unbelievable disciplined division of duty for one spouse or the other to knock off early that day, which [has] an absolute impact on career advancement, or, there’s still gonna be one, if you have two faculty who are married and have a child, one of ‘em’s gonna take a hit.” *Male*

Furthermore, participants referred to female colleagues who questioned the general academic attitudes and perceptions, choosing a part time or other nontraditional career path.

“I know a couple people that, they were working at Case in a different department, and they just decided not to pursue a career because they want to be more the caregiver and they feel they didn’t have enough support, and they just try to find alternative jobs, some place else, whether it’s teaching at school or any other sort of possible, agreeable jobs based on their degree.” *Male*

“I remember I used to have friends, women friends in college, and they did very well, they were in the top students and they went abroad for PhD and then for one of my friends...[is] still very active researcher, she has no kids. And then for the other one, she has kids, but then she is still a post

doc and she's happy to be a senior post doc in a lab. And she doesn't need to spend a lot of time in the lab, she doesn't want the pressure." *Male*

*b. Academia, as an Environment, is Resistant to Change:*

Participants in our focus groups discussed resistance to change and improvement efforts across the academe. Participants in our male focus group wondered whether changes at the University level would benefit Case or reduce its competitive edge with other research universities. A respondent in our men's focus group indicated that although positive changes had been implemented at Case, the federal granting agencies have not followed suit.

"... You can get [tenure] extensions for family reasons, but that doesn't necessarily solve the problem... Even if Case was extremely flexible in terms of the amount of time... grant agencies are not... If your productivity is not what it should be in a four year period, or what they're looking for, family issues are not taken into consideration if you're trying to renew a grant at NIH. *Male*

Another respondent in the men's focus group supports this, explaining:

"I think the Heart Association has a box, 'Please explain deviations.'... You know that kind of thing should be built into the system, I mean it's kind of inhumane to expect the same thing out of someone that has 4 kids than someone who didn't in those first nine years. But the federal government, they don't have anything, like the NIH or NSF, they don't have that little box to explain what you were doing. *Male*

Themes regarding the academic environment also dealt with the tenure system, questioning its efficacy and effects on the culture of the academe.

"What I see happening, in the recent years, that the pressure to receive tenure is so great, that when they get tenure, men *or* women, they just don't do anything for 5 or 6 years. In a sense, it's kind of understandable. And what's sad is that some people just say they've been forced in the process of getting tenure, to do stuff they weren't that excited about, so they've lost all taste for doing research. You know, they say, 'What's the point of all this?' It's really sad." *Male*

"[Women] come in as assistant, may even make tenure, but for some reason they drop out of the system before being promoted and remaining as sort of a full professor. So they're more in the junior ranks of women in percentage to males, but that drops off. And the question is, is there something about the expectations and the demands that get placed when you jump to associate with tenure, then you go for full, that for one reason or another women are not happy. I would like to say that I had one woman faculty member leave the department, and this was after she received tenure, and her tenure case was very strong... And

then, she left. And she wasn't happy with academia, and didn't like working in academia, and she didn't want to go through the rest of this process to be reviewed again... and I'm wondering if there's something about the pressure, just the nature of being faculty / employee and working toward these various goals, and in some women's cases they stand back and say, "I'm just... this isn't making me happy. I'm not happy. I don't like this. I'd rather do something else." And maybe this is a fundamental cultural difference between men and women, but I think a lot of times men never ask that question." *Male*

Speaking about the latent sexism among benefactors, corporate sponsorship, and other donors to Universities, one department chair observes:

"I think the sexism of the external environment is a horrible limitation that we have to face in terms of some very viable candidates for leadership roles-- donors, board members, CEO's-- because, it's still is more male dominated. The visiting committees and boards may not be quite equal but close to it, but as research shows, women aren't on the key committees. So I think that has makes it difficult. In our field in particular, when we've looked at a female candidate, at one time it was a serious candidate, I didn't think she got a fair shake in terms of... some of my male counterparts, but because this is a [professional] school, that means we're so dependent on CEOs for hiring students, or at least their opinions endorsing them, and from donors. There's a level on leadership issues... at the dean level as well, I think that that is still an major challenge." *Male*

### COMPLIMENTS AND RECOMMENDATIONS.

The above quotes and themes support the assertion that faculty members at Case are aware of and concerned about equitable access to resources, work-life integration, and quality of life among faculty members at this university.

#### *a. Positive Comments:*

In addition to these perceptions and experiences, our respondents also had many positive comments about Case.

"One of the reasons I came here, instead of other places, is because [Case] did seem [more functional], not on a male/female equity level, but just that this department seemed to be more collegial." *Male*

"I have one child. In my previous job, I had to pretend that I had no personal life. Coming here it was a relief that male colleagues said no to 8:00AM meetings because they had to drop their child off at school then.

In my experience, it's more accepted at Case that you have a life outside of here." *Female*

"It's very easy to get extensions on the tenure clock, if you take a year off to deal with the kids. So there's been an accommodation for that." *Male*

"[Having] any outbreaks of sexism, which are overt, to be dealt with, we've already covered. So I wouldn't even bother bringing it up, because I think we've got mechanisms in place. I'm not saying we're dealing with it *all*, but on the whole, when you can see it there's somebody doing something about it." *Male*

"...Going to the 9-year tenure clock, giving people a year of maternity leave without it counting against the tenure clock was helpful. I think that this NSF program is helping and will help. I think there's a Provost's program set aside to bring more senior women faculty to bring them onto campus, to create more of a [positive] model." *Male*

*b. Recommendations:*

One question from our interview guide asks each participant to imagine they had 5 minutes with President Hundert and to describe what they would suggest to make Case a more equitable environment for faculty members. Below are some of the ideas collected.

"Aside from daycare? That's my first thing." *Female*

"...I think it would be nice if the administration would take a good look at infrastructure that's here and ask a few questions of faculty about what can we do." *Male*

"Case needs to stop beating itself over it's head with a stick- it's got an inferiority complex. Why? Because it fails to recognize that we're one of the best regional universities in the United States. Forget about trying to be another MIT, another Harvard. Forget it! Be Case. Don't try to be anything else. Once you accept what you are, you'll find you'll have no difficulty in selling yourself. We have no problem getting students to apply, just not in numbers that would be compatible with rankings from US News & World Report. Who *cares*? We can fill the place up with students who want to be here. So what's the problem?" *Male*

"I would tell him it comes from the top. We need a cultural overhaul. It only happens when it's clearly a priority. You don't make a presidential advisory council on women and have 3 people in between you and it and call it a 'university council on women' which answers to the vice-provost, instead of a direct line like previously." *Female*

“[Get] rid of associate professor ranks and just once you’re tenured, you’re full. And I’m saying that for both male and female faculty members. I think it’s an archaic distinction. ... When you get tenure, you get associate with it, and then there’s this other hurdle. And that other hurdle keeps people from building the institution, spending time in program development, doing things that are just as important in a university as research. I’m not suggesting we stop the research or anything, I’m just saying we’re building the institution on the backs of people whose backs are going to break. Because they’re not going to get full, they’re going to get tired of being asked to serve on committees and so forth, and there are other people who I think have an instinct to serve and an instinct to build [the] institution and community, [but] who are feeling forced to choose otherwise. *Male*

“You need resources to attract the top people. People get frustrated and leave. When the dean of [my school] describes success in terms of *not losing people*, that’s pathetic.” *Female*

“Listen to [women], first. I mean have a set of conversations, yourself, as well as encourage every one of your key people to access the different women faculty separately from the men. Now you should access them together as well, but there are separate issues that they face, and they need to be heard with a time and a place that they can talk.” *Male*

“It’s almost impossible for me to conceive of this as being a family friendly, gender-neutral institution of work without some form of childcare. It just doesn’t work. It hurts the women much, much more than the men. I don’t know how to do that, I don’t know what it would look like, but you’ve got to attend to that. It’s got to be done.” *Male*

“Spend some money as a research intensive institution. It applies to all issues. They’re conservative here.” *Female*

“Maybe it’s got nothing to do with gender issue, but certainly it’s attitude. It amazes me that the university doesn’t hire the people who sweep up the floors, do the kitchen work, clean our buildings. If they were Case employees, we’d have a bond with the local community that would be hard to beat. Why, because if their kids were academically eligible they could come to school. What would it cost the University to let two extra people sit in on my class, not much, and there’s plenty of room! In the end, okay, maybe it costs a little more, but... if we want to be helpful to the local economy, we don’t need to start with some high tech specialized industry, which probably wouldn’t benefit a lot of people, but *this* would. How many people work here at the janitorial level? And their families, and where do they live? They live right over there.” *Male*

“Actions speak louder than words.” *Female*

**Focus Group Report - Appendix 1:  
Phase II Interview Guide for REC Focus Groups  
2004**

The interview guide for the focus group sessions consisted of five questions:

- 1. How do you think the experience of being a faculty member at CWRU is different for women than it is for men?*
- 2. Does gender make any difference in access to resources for faculty at CWRU – things like salary, travel money, teaching loads, committee assignments, lab space, access to clerical or other support, institutional research funds, sabbatical or other leaves?*
- 3. Do you think gender makes any difference in everyday interaction among faculty, between faculty and administrators, or between faculty and staff? Do people notice gender when they talk with one another?*
- 4. Does the impact of family life differ for men and women faculty? Do women and men face different issues in balancing work and family demands?*
- 5. Do you think the issues facing women faculty change across the academic career – as we/they move from assistant professor to full professor?*

After completing the interview guide, the moderator concluded the session with two questions, asked in a round-robin manner.

- 1. Suppose you had one minute to talk to President Hundert about how to improve the situation for women faculty at CWRU. What would you say?*
- 2. Have we missed anything? Is there anything we should have asked but didn't?*

**Focus Group Report - Appendix 2:  
Phase II Note Card Statements  
2004**

**“Please summarize your experiences as a Case faculty member in one word or phrase.”**

“Challenging.” *Male*

“I have had a mixed experience. Case has provided many opportunities. However, the expectations are quite high but the support is not always there.” *Male*

“I have been successful, but like a car that is being driven at 60mph with the parking brake on. You move forward, but with a lot of resistance to overcome.” *Female*

“In general, my experiences were positive. There are better institutions – but there are also others that are really terribly. However, its reputation is better than the actual experience.” *Male*

“Good working environment within my specific department. At times difficult to cross over to other departments and colleagues. Sensation you are in a vacuum as far as external (university) support/help/consideration.” *Male*

“My experience in my department has made me painfully aware of the challenges facing women in science – it is the first time in my life I have felt disadvantaged for being a woman.” *Female*

“Frustration. Old-fashioned culture. Conservative. So how do I get anything accomplished with these obstacles?” *Female*

“My overall experience is generally positive, but mixed. The academic career is challenging, over consuming at times, but rewarding in this environment. However, more support, both in mentoring as well as administratively could have improved the experience.” *Male*

“Supporting.” *Male*

“Marginalized. Isolated. Working hard all the time. Watching for indirect signs of support (because direct signs are very rare).” *Female*

“My experience at Case has been excellent in terms of support, mentoring, and feedback.” *Male*



“In my experience, Case has provided a positive environment for research. What problems I have would not be solved by moving.” *Male*

“I do not like the startup package, which is 50% compared to a lot of others. I think the academic atmosphere will be better if we have better academic seminars. I particularly think the parking is a problem. It is easier for a student to get parking compared to faculty. What is the logic to it?” *Male*

“I came to Case from another university... We are, my family and I, extremely pleased with our new situation. Case provides a fantastic environment both professionally and personal. The topic of this focus group aside, it should be recognized that this is a quality institution run by professionals for professionals.” *Male*

“Abused.” *Male*

“Ok, though the Case community lacks creativity and innovation, and is dull.” *Male*

### APPENDIX 3: Climate Survey

Please type in your Study Code below.

How often, *in the past 24 months*, have you participated in any of the following activities on campus or within University Circle?

	Never	Rarely	Sometimes	Frequently	Don't Know / NA
(a) Brown bag discussion.					
(b) Seminar / visiting lecturer.					
(c) Colloquium.					
(d) University academic ceremonies (e.g., convocation).					
(e) Social event.					
(f) Politically oriented event.					
(g) Sporting event.					
(h) Student-organized event.					
(i) Cultural event / performance.					
(j) Other community event (e.g., memorial service).					

How often, *in the past 24 months*, have you wanted to attend an event or function on campus or within University Circle, but did not because of the following reasons?

	Never	Rarely	Sometimes	Frequently	Don't Know / NA
(a) I did not know about the event.					
(b) I did not know anyone else who was going to attend.					
(c) I was too busy.					
(d) It was just too far away.					
(e) I had already gone home for the day.					
(f) I don't feel safe on campus after dark.					
(g) It was on the other side of Euclid Avenue.					
(h) Other.					

Overall, how involved would you say you are in campus activities?

- Not at all
- To some extent
- To a moderate extent
- To a great extent
- Don't know / NA

Please rate the following statements about your primary unit. Please consider your department as your primary unit, otherwise refer to your school as your primary unit.

Strongly disagree   Somewhat disagree   Somewhat agree   Strongly agree   Don't know / NA  
69

(a) Colleagues in my primary unit value my work.

(b) Colleagues in my primary unit can be trusted.

(c) I feel pressure to change my work habits to gain the respect of colleagues in my primary unit.

(d) I feel pressure to change my work interests to earn tenure / promotion.

(e) I am comfortable asking questions about performance expectations.

(f) I am reluctant to raise controversial issues for fear it will affect my promotion / tenure.

(g) I feel I can make my primary unit a better place to work.

(h) Colleagues in my primary unit provide me feedback about research/scholarly issues.

Strongly disagree      Somewhat disagree      Somewhat agree      Strongly agree      Don't know / NA

(i) Colleagues in my primary unit provide me advice about career/professional issues.

(j) Colleagues in my primary unit have *lower* expectations of me than others in my position.

(k) Colleagues in my primary unit have *higher* expectations of me than others in my position.

(l) I constantly feel under scrutiny by colleagues in my primary unit.

(m) Colleagues in my primary unit solicit my opinions about scholarly issues.

(n) Colleagues in my primary unit solicit my opinions about professional/clinical activities.

(o) I solicit my colleagues' advice/assistance about my research.

(p) I have to work harder than my colleagues to be perceived as a legitimate scholar.

Strongly disagree      Somewhat disagree      Somewhat agree      Strongly agree      Don't know / NA

(q) I generally interact positively with colleagues in my primary unit.

(r) I feel professionally welcome and included by colleagues in my primary unit.

(s) Colleagues in my primary unit include me in social events and activities *on* campus.

(t) Colleagues in my primary unit include me in social events and activities *off* campus.

(u) Gender makes a difference in everyday interactions in my primary unit.

(v) Race makes a difference in everyday interactions in my primary unit.

(w) Gender makes a difference in access to resources for faculty in my primary unit .

(x) Race makes a difference in access to resources for faculty in my primary unit.

(y) Colleagues in my primary unit consider female faculty who have children to be less committed to their careers.

(z) Colleagues in my primary unit consider male faculty who have children to be less committed to their careers.

Please rate the extent to which your primary unit (department / school) supports the following career-relevant issues.

**Poorly      To some extent      To a large extent      Very well      Don't know / NA**

(a) Flexibility regarding family responsibilities.

(b) Family leave.

(c) Child care.

(d) Partner / spousal hiring.

(e) Tenure clock adjustment.

(f) Sabbatical leave.

(g) Mental / physical health accommodations.

Please rate the following statements regarding the head (chair / dean) of your primary unit (department / school).

**Strongly disagree      Somewhat disagree      Somewhat agree      Strongly agree      Don't know / NA**

(a) Maintains high academic standards.

(b) Is open to constructive criticism.

(c) Is an effective administrator.

(d) Shows interest in faculty / researchers.

(e) Treats faculty/researchers in an even-handed way.

(f) Helps me obtain the resources I need.

(g) Gives me useful feedback about my performance.

(h) Articulates a clear vision.

Strongly disagree      Somewhat disagree      Somewhat agree      Strongly agree      Don't know / NA

(i) Articulates clear criteria for promotion/tenure.

(j) Honors agreements.

(k) Handles disputes/problems effectively.

(l) Communicates consistently with faculty/ researchers.

(m) Creates a cooperative and supportive environment.

(n) Shows commitment to diversity.

(o) Facilitates collegial interactions among the faculty.

(p) Is a mentor to me.

(q) Values my mentoring of others.

(r) Provides administrative opportunities.

Strongly disagree

Somewhat disagree

Somewhat agree

Strongly agree

Don't know / NA

(s) Provides teaching development opportunities.

(t) Shares resources/opportunities fairly.

(u) Involves me in important decision-making processes.

Please indicate your level of agreement with each of the following statements regarding the Case campus community as a whole.

**Strongly disagree    Somewhat disagree    Somewhat agree    Strongly agree    Don't know / NA**

(a) Faculty at Case respect each other.

(b) Faculty at Case are treated with respect by campus administrators.

(c) Faculty at Case are typically at odds with campus administrators.

(d) There is a great deal of conformity among the faculty at Case.

(e) Faculty at Case have a condescending attitude towards faculty from other countries.

(f) Faculty at Case have a condescending attitude towards staff from other countries.

(g) Sexist remarks are heard in faculty gatherings at Case.

(h) Racist remarks are heard in faculty gatherings at Case.

(i) Ageist remarks are heard in faculty gatherings at Case.

Please rate the following regarding mentoring you receive, which is defined as advice or counsel on scholarly or career issues, or sponsorship or advocacy on your behalf.

**None    To some extent    To a moderate extent    To a great extent    Don't know / NA**

(a) To what extent do you receive *formal* mentoring within your primary unit (department/school)?

(b) To what extent do you receive *informal* mentoring within your primary unit (department/school)?

(c) To what extent do you receive *formal* mentoring outside your primary unit, but within the University?

(d) To what extent do you receive *informal* mentoring outside your primary unit, but within the University?

(e) To what extent do you receive *formal* mentoring outside of the University?

(f) To what extent do you receive *informal* mentoring outside of the University?

For each of the three categories below, please indicate your level of agreement for the following resources available through your primary unit (department / school).

	Appropriate to advance your work					Fair in comparison with others in your department					Decision making process behind allocation is made clear				
	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Don't know / NA	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Don't know / NA	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Don't know / NA
(a) Office space.															
(b) Laboratory space/space for housing research animals.															
(c) Teaching assistants or graders.															
(d) Teaching load.															
(e) Student advising responsibilities.															
(f) Service/committee assignments.															
(g) Assistance in grant preparation, including budgets.															
(h) Internal funding for new research or teaching ideas.															
(i) Internal funding for bridge support between external grants.															
(j) Salary during academic year.															
(k) Salary during the summer.															
(l) Administrative supplement salary.															
(m) Start-up package and contract.															
(n) Consulting opportunities.															
(o) Support for professional development/travel funds.															

(p) Assistance in obtaining patents, copyrights, or trademarks.			
(q) Computers/equipment and technical support.			
(r) Clerical/secretarial support.			

Please indicate how satisfied you are with each of the following dimensions of your professional life.

	Strongly dissatisfied	Somewhat dissatisfied	Somewhat satisfied	Strongly satisfied	Don't know / NA
(a) Overall experience of community at Case.					
(b) Overall experience of collegiality in your primary unit (department / school).					
(c) Overall experience of being a faculty member in your primary unit (department / school).					
(d) Teaching and service load.					
(e) Teaching and research balance.					
(f) Success of your research or scholarship.					
(g) Effectiveness of your teaching.					
(h) Mentoring you have received in your primary unit (department / school).					
(i) Mentoring you have received within the University.					
(j) Service within the University.					
(k) Service in your academic discipline.					
(l) Community service.					
(m) Professional development opportunities.					

What is the total number of committees you are currently involved in (department, school, and University)?

In which school / college do you work?

Prefer not to answer



Mandel School of Applied Social Sciences  
School of Nursing  
School of Law  
Arts & Sciences  
School of Engineering  
School of Medicine  
School of Dentistry  
Weatherhead School of Management

College of Arts and Sciences (Please select your department)

Anthropology  
Art History / Art / Art Education  
Astronomy  
Biology  
Chemistry  
Classics  
Communication Sciences  
English  
Geological Sciences  
History  
Mathematics  
Modern Languages and Literature  
Music  
Philosophy  
Physics  
Political Science  
Psychology  
Religion  
Sociology  
Statistics  
Theater and Dance

School of Engineering (Please select your department)

Biomedical Engineering

Chemical Engineering

Civil Engineering

Electrical Engineering and Computer Science

Macromolecular Science

Materials Science and Engineering

Mechanical and Aerospace Engineering

School of Medicine (Please select your department)

Anatomy

Biochemistry

Biomedical Engineering

Department of Bioethics

Environmental Health Sciences

Epidemiology and Biostatistics

Genetics

General Medical Sciences: Cancer

General Medical Sciences: Adolescent Health

General Medical Sciences: Bioarchitectonics

General Medical Sciences: Global Health and Diseases

General Medical Sciences: Physical and Rehabilitation Medicine

General Medical Sciences: RNA Molecular Biology

Molecular Biology and Microbiology

Neurosciences

Nutrition

Pathology

Pharmacology

Physiology and Biophysics

Departments of Anesthesiology

Departments of Dermatology

Departments of Emergency Medicine

Department of Family Medicine

Departments of Medicine

Med / Peds Departments

Departments of Neurology

Departments of Neurosurgery

Departments of Obstetrics / Gynecology

Departments of Ophthalmology

Departments of Otolaryngology

Departments of Orthopedics

Departments of Pathology

Departments of Pediatric

Departments of Physical Medicine and Rehabilitation

Departments of Plastic Surgery

Departments of Psychiatry

Departments of Radiology

Departments of Surgery

Departments of Urology

School of Dentistry (Please select your department)

Endodontics

Oral Diagnosis and Radiology

Oral and Maxillofacial Surgery

Orthodontics

Pediatric Dentistry

Periodontics

Restorative Dentistry

School of Management (Please select your department)

Accountancy

Banking and Finance

Economics

Information Systems

Marketing and Policy Studies

Operations

Organizational Behavior

What type of appointment do you hold?

- Tenured
- In tenure track
- Non-tenure track
- Other

If you are a tenured faculty member, in which year did you receive tenure?

What is your current rank?

- Lecturer
- Instructor
- Assistant professor
- Associate professor
- Professor
- Adjunct faculty
- Visiting faculty
- Research faculty
- Other

Please indicate your work schedule at Case.

- Full-time
- Part-time

How many years have you spent at each rank at Case? (Mark zero where necessary):

- Instructor
- Assistant professor
- Associate professor
- Professor



Adjunct faculty

Visiting faculty

Research associate

Other

What is your gender?

Female

Male

With what race/ethnic group do you identify?

African / African American

Alaskan Native

Asian or Pacific Islander

Caucasian (European)

Caucasian (Indian)

Caucasian (Middle Eastern)

Caribbean Islander

Hispanic / Latino / Latina

Native American

Other

Please indicate your domestic status / living situation.

Living alone

Living with a spouse or partner

Living with other adults (e.g. family member, roommate)

Prefer not to answer

Is your spouse / partner currently in the labor force?

Yes

No

Please indicate your spouse / partner's work schedule.

Full-time

Part-time

Is your spouse / partner employed by Case?

Yes

No

Are there children living in your household?

Yes

No

Prefer not to answer

Please indicate how many children live in your household with the corresponding ages. (Mark zero where necessary.)

2 years and under

Ages 3 to 5 years

Ages 6 to 12 years

Ages 13 to 18 years

Ages 19 to 21 years

22 years and older

Is there anything further you would like to tell the researchers?

## APPENDIX 4: Baseline Questionnaire and Descriptives

## Baseline Questionnaire - Descriptive Statistics

1 - Not at all, 2 - To Some Extent, 3 - To a Moderate Extent, 4 - To a Great Extent

### Women (N=12)

<u>Item</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>sd</u>
1. Are clear about career direction and goals in the next 5 years	2.00	4.00	3.25	0.87
2. Are able to clearly articulate your career direction and goals to others	2.00	4.00	3.25	0.87
3. Have exercised initiative towards attaining your career goals	2.00	4.00	3.33	0.65
4. Have taken proactive steps to increase your scholarly visibility (e.g., hosting a conference, chairing a	1.00	4.00	2.33	1.07
5. Are clear about the role of a mentor	3.00	4.00	3.58	0.51
6. Have actively sought mentoring from within your department	2.00	4.00	3.33	0.78
7. Have actively sought mentoring from outside your department	1.00	4.00	2.42	1.00
8. Mentor other colleagues in your department	1.00	3.00	2.42	0.90
9. Mentor students/postdocs in your department	2.00	4.00	3.67	0.65
10. Exert influence in your department	1.00	4.00	2.17	0.94
11. Exert influence in your discipline/field	1.00	4.00	2.08	1.08
12. Feel successful in your department	1.00	4.00	2.33	1.07
13. Feel successful in your discipline/field	1.00	4.00	2.58	0.79
14. Feel a sense of control over your work and environment (e.g. time allocation, research and teaching agenda, resources)	2.00	4.00	2.50	0.67
15. Are able to balance multiple priorities and effectively use your time	2.00	4.00	3.00	0.60
16. Your current career opportunities	1.00	4.00	2.67	0.89
17. Your career progress to date	1.00	4.00	2.92	1.08
18. Your overall academic/scholarly contributions	2.00	4.00	3.00	0.74
19. The collegueship you provide in your department	1.00	4.00	2.91	1.04
20. The leadership you provide in your department	1.00	4.00	2.64	0.92
21. Your likely career success in the next 5 years	1.00	4.00	2.70	0.95

**Chairs (N=3)**

<u>Item</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>sd</u>
1. Are clear about your career direction and goals in the next 5 years	1.00	4.00	2.67	1.53
2. Are clear about your department's direction and goals in the next 5 years	3.00	4.00	3.67	0.58
3. Are able to clearly articulate your career goals to others	4.00	4.00	4.00	0.00
4. Are able to clearly articulate your department's goals to others	3.00	4.00	3.67	0.58
5. Have exercised initiative towards attaining your career goals	2.00	4.00	3.00	1.00
6. Have exercised initiative toward attaining your department's goals	3.00	4.00	3.67	0.58
7. Have taken proactive steps to increase your own visibility	2.00	3.00	2.67	0.58
8. Have taken proactive steps to increase your department's visibility	3.00	4.00	3.67	0.58
9. Are clear about the role of a mentor	4.00	4.00	4.00	0.00
10. Have actively provided mentoring within your department	3.00	4.00	3.33	0.58
11. Have actively provided mentoring outside your department	2.00	4.00	3.00	1.00
12. Exert influence in your department	4.00	4.00	4.00	0.00
13. Exert influence in the university	1.00	4.00	2.67	1.53
14. Exert influence in your discipline/field	2.00	3.00	2.67	0.58
15. Feel successful in your department	4.00	4.00	4.00	0.00
16. Feel successful in the university	1.00	4.00	3.00	1.73
17. Feel successful in your discipline/field/profession	3.00	4.00	3.33	0.58
18. Feel a sense of control over your work and environment	3.00	4.00	3.67	0.58
19. Are able to balance multiple priorities and effectively use your time	3.00	4.00	3.67	0.58
20. Your current career opportunities	2.00	4.00	3.33	1.15
21. Your career progress to date	2.00	4.00	3.33	1.15
22. Your department's overall success in your academic discipline	3.00	4.00	3.67	0.58
23. The leadership you provide in your department	3.00	4.00	3.67	0.58
24. The mentoring you provide in your department	3.00	4.00	3.33	0.58
25. Your likely career success in the next 5 years	3.00	3.00	3.00	0.00
26. Your department's likely success in the next 5 years	3.00	4.00	3.67	0.58



## APPENDIX 5: Coaching Evaluation

# NSF-ACES Executive Coaching Evaluation

Please fill out your coach's name and evaluate your coaching sessions on the following items.

	Excellent	Very Good	Good	Fair	Poor
Coach's Name: _____					
Provided insights into your career and performance  <i>Comments:</i>	5	4	3	2	1
Provided assistance in the development of your career goals and action steps.  <i>Comments:</i>	5	4	3	2	1
Listened carefully to questions and comments  <i>Comments:</i>	5	4	3	2	1
Appropriately focused discussion on academic and/or personal objectives  <i>Comments:</i>	5	4	3	2	1
Used effective coaching style and interpersonal skills  <i>Comments:</i>	5	4	3	2	1
Overall Coaching Effectiveness  <i>Comments:</i>	5	4	3	2	1

Please describe your overall coaching experience.

Did you feel encouraged to make improvements based on your coaching sessions?

Please describe ways in which your coaching experience met or did not meet your expectations.

NAME \_\_\_\_\_ (optional)

*If you are filling out this form electronically, you can either save a copy and e-mail it to [nsf-aces-evaluation@case.edu](mailto:nsf-aces-evaluation@case.edu) or click "Save Answers and Send" if you have a default e-mail program set up, such as Outlook, Eudora, or AOL.*

*If you are printing out this form, please mail it to:*

*Susan Perry  
Dept. of Organizational Behavior  
7235*

*or fax to Susan Perry at 216-368-4785*

*Thank you for your feedback!*

## APPENDIX 6: Neurosciences Case Study

**Summary Research Proposal**  
***Creating Lives in Science: A Case Study of an Academic Science Department***

## **Introduction**

This case study is a component of the NSF ADVANCE project with the objective of institutional transformation that will effect tangible change for women in science and engineering. The proposed case study description from the NSF grant proposal document is as follows:

*“A study, to be conducted by Dr. Bilimoria, will consist of two concurrent investigations – first, a case study examination of the Neuroscience Department as an example of a department with a history of strong participation and advancement of women faculty. The goal will be to identify the departmental conditions that foster full participation of women at all academic ranks. The Neurosciences Department is nationally ranked in the 7<sup>th</sup> percentile. It has 19 faculty, 5 of whom are women, 2 at the full professor level. The female department chair was recently elected to the National Academy of Sciences. Although the department has no defined policies in this area, it provides an excellent case study site for examining the working environment conducive to the advancement of women faculty and students.”*

## **Research Questions**

The guiding question of this study is, “How is an engaging, productive department, which is inclusive of women and men, established developed and maintained? Thus, the research questions that frame this study are:

- How did this department develop its current internal environment?
- What participants, behaviors, norms, interactions, values and or beliefs constitute the internal environment of the department?
- How do the chair and department members contribute to creating, maintaining and developing the internal environment within the department?
- How do people come to feel they are valued members of the department?
- What is the influence of the department’s internal environment on the lives and work of its members?

## **Methods and Procedure**

The case study site is the CWRU Neurosciences department. The department includes faculty, staff, post doctorates and students who work, conduct research and or teach within the department. The focus of data collection will be the 16 primary faculty members of the department. However, secondary faculty, who teach neuroscience post-docs and students or host them in laboratories, are part of the study as well.

The case study research approach is used in this study as described and explained by Robert Yin (Yin, 2003). Yin defines a case study as: “An empirical inquiry that investigates a contemporary phenomenon with its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003, p. 13). This research approach utilizes collection of data from multiple sources, including existing documents, direct observation, interviews and or surveys within the area or frame of study.

## **Document & Archival Research**

Basic information about the department such as the department structure, activities and formal policies and processes will be collected from documented sources. These sources include published guides, handbooks, policy or practice correspondence to the department and the department website. Department performance information will be gathered, such as department ranking, number of publications and grants, amount of grant funding, number and outcomes for graduates of the program, and

## *Summary Research Proposal*

recruiting history. Demographic information will be collected and records information including years in department, rank, whether tenured at CWRU or elsewhere and gender and ethnicity. Department faculty and Post-docs will be asked for a copy of their CVs. News announcements, websites, published lectures or speeches and available public biographical information will also be reviewed. See Yin 2003.

### Direct Observation

Observation allows the researcher to collect data on relevant behaviors or environmental conditions (Yin, 2003). This study will employ direct observation of the setting and routines of the department. Detail descriptions of the workspaces will be gathered and how the spaces are used will be observed. Counts of the number of participants or numbers of behaviors or patterns of behavior will be noted. Accounts of particular interactions that describe the working environment may be noted. If convenient for participants, the researcher may ask questions to help her understand what people are doing and how they go about their activities in the environment. (Patton, 2002). See Attachment 1 for the observation guide. Settings of interest for observation include laboratories, classes, colloquia and select faculty and department meetings. We will develop a schedule for observation of these settings with participants in advance. If demographic or other personal background factors are relevant to describing and analysing an observation, specific participant names will not be noted. A code will be used instead.

### Interviews

“Semi- structured”, one on one interviews (Knight, 2002), of about 1 hour in length, will be conducted with willing participants within the department. The focus of these interviews is participants’ personal experience within the work environment, their perceptions of the environment and the impact of this environment on their lives outside of work and their careers in science. See the interview guide in Attachment 2.

### Survey

Previous research indicates that department work environment, is important to the success of women scientists. (Etzkowitz, Kemelgor, & Uzzi, 2000; Fort, 1993; Hoffmam-Kim, 1999; Long, 2001; Rosser, 1999). Thus, a survey will be used to gather data about the department work environment in areas of formal influence between department members, communication, collaboration, organizational structure, work design and career development. The survey closely follows the PACE (Personal Assessment of the College Environment) instrument, but has been modified for a department setting. This validated survey has been used at a number of colleges. This survey will be directed to subgroups within the department namely: faculty, Post-docs, scientific staff and students. See the Survey in Attachment 3.

### **Data Verification and Analysis**

We will analyze the data for themes and concepts to develop theory about the creation of productive, engaging and inclusive work environments. The multi-method approach of this study allows for “data triangulation” (Yin, 2003). Data triangulation is “aimed at corroborating the same fact or phenomenon” (Yin, 2003, p. 99). We will verify the data analysis two ways. The reliability of the data analysis will be checked using a second coder who will review and code a sub-sample of the data. The researcher’s coding and the coder’s codes will be compared and reconciled and the revised code will be used to check the data. Second, a feedback session will be conducted with participants. They will have an opportunity to confirm or suggest revisions to the themes from the data. This may be a single session with faculty or multiple sessions by subgroup within the department. The chair will be offered a private feedback session. See Attachment 4 for the group feedback session confidentiality agreement. In summary, we will use the different sources of data to verify the data and different viewers of the data to verify the analysis.

## *Summary Research Proposal*

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## INTERVIEW GUIDE

*(Review Informed Consent, answer any remaining questions, sign forms to formalize agreement to participate)*

*This interview consists of three short stories of up to 10 minutes in length and two open-ended questions.*

### **(Stories about experiences in the work environment)**

*I will introduce a topic area and I ask that you tell me a story about the topic. Try to include the situation or background to the story, when it happened and who was involved. Explain what happened, what were the outcomes and the influence on you. I will ask questions to clarify the story and I will monitor the time.*

1. ) Looking back over the past 6 months to one year within the department, think of a time you felt most engaged in your work within the department, by “engaged” I mean you felt sync with, committed to, or constructively busy. Tell me a story about one of your experiences at that time.

*OK, thank you. For the next story*

2.) Please tell me about how you came to join this department  
*(Newcomer - less than 3 months- interview starts here)*

*Prompts:*

*What appealed to you about this department before you joined?*

*How has your actual experience matched those observations or impressions?*

*For faculty here since department founding: How is the department the same now as it was when you joined? How is it different?*

*For the last story...*

3.) Please tell me about a time that members of this department helped you develop as a scientist.

*Probe:*

*What role did the chair play?*

*For all stories clarification questions are:*

- *What were the circumstances?*
- *What was your role?*
- *Who was involved?*
- *What happened?*
- *What was the outcome?*
- *Aftermath, if any?*

*Closing prompts:*



Thinking about these stories and your overall experience in the department what do you value most about:

- Your relationships with people in the department?
- Processes or ways of doing things in the department?
- Structures that support you in advancing your work and career?

In what ways do you feel you are valued or recognized?

- For your work in this department?
- As a person in this department?

### **(Open Ended Questions)**

4.) When have you had to make the choice between your career and other personal demands or important aspects of your life?

#### *Probes*

- *What can you tell me about the situation?*
- *How was it resolved? (// phrasing: What was the outcome?)*
- *What did you learn about your priorities through this experience?*
- *What did you learn about the department through this experience?*

5.) To close, I am going to give you some incomplete sentences. I ask you to complete the sentences based on your knowledge of and experience in the department:

A successful academic scientist has:

does: \_\_\_\_\_.

is: \_\_\_\_\_.

#### *Probes:*

*(What? How? or When? for each)*

## Department Survey

Based on your experience, check the box that best describes the extent to which you or department members engage in the following:

	<i>Not at All</i>	<i>Hardly at all</i>	<i>Somewhat</i>	<i>Very Much</i>	<i>Uncertain</i>
<b>Formal Influence</b>					
The extent to which my chair expresses confidence in my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my chair provides timely feedback regarding my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my chair emphasizes my personal development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my ideas are seriously considered by my colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I have the opportunity to express my ideas in appropriate forums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my ideas are actively sought by my colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I am able to appropriately influence the direction of this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which this department has been successful in positively motivating my performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Communication

The extent to which I receive useful information from colleagues related to my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which unacceptable behaviors are identified and communicated to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which open and ethical communication is practiced at this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I receive adequate information regarding important activities in this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which information is shared within this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Collaboration

The extent to which I have an opportunity to work jointly with appropriate others at this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which a spirit of cooperation exists in my department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which there is a spirit of cooperation within my laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which there is an opportunity for all ideas to be exchanged within my department.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which there is an opportunity for all ideas to be exchanged within my laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my department coordinates its efforts with appropriate individuals and teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which members of my laboratory coordinate their efforts with appropriate individuals and teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which my peers help me to improve my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<i>Not at All</i>	<i>Hardly at all</i>	<i>Somewhat</i>	<i>Very Much</i>	<i>Uncertain</i>
The extent to which there is a sense of trust and confidence among all members of the department community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Organizational Structure**

The extent to which department-wide policies guide my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which the <u>amount</u> of work I do is appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which the <u>variety</u> of work I do is appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I am able to organize my work day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which decisions are made at the appropriate level at this department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which the department adheres to policies and procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which the department addresses workload issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Work Design/Technology/Physical space**

The extent to which I am provided up-to-date technology in my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I have enough space to do my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The extent to which I have enough laboratory assistance to do my research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Satisfaction**

	<i>Not at All</i>	<i>Hardly at all</i>	<i>Somewhat</i>	<i>Very Much</i>	<i>No opinion</i>
Overall I am satisfied with the work environment in my department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please evaluate the extent to which your department is actively involved in promoting the careers of its scientists with support and guidance:

	<i>Not at All</i>	<i>Hardly at all</i>	<i>Somewhat</i>	<i>Very Much</i>	<i>No Policy</i>
Identifying grant sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparing/writing grants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtaining start up funds for equipment and supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtaining consulting contracts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organizing courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advising students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtaining TAs, Research Assistants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtaining secretarial support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Do you most often carry out your research:** *Check all that apply*

- alone
- in a research lab
- both

**If you work alone, do you most often carry out research alone:** *Check all that apply*

- always by choice
- sometimes by choice
- rarely by choice

**If you work within a group/lab, do you work primarily with:** *Check all that apply*

- other scientists
- graduate students
- post docs
- Other \_\_\_\_\_

**Demographic Information**

*Please circle or fill in your response*

1. Gender:     Male     Female

2. Social (Race) or Cultural/ ethnic affiliation: \_\_\_\_\_

3. Spousal Status:     Single     Married     Divorced     Other

4. Do you have children:     No     Yes  
If yes, number \_\_\_\_\_

5. Are you the primary caregiver for:             Children     Parents     Other individual(s)

6. If married, is your spouse employed in: (circle one)  
a tenured position at the same / nearby / other institution  
the private sector  
a tenure track position at the same / nearby / other institution  
the public sector  
other  
not employed