

A FOCUS ON THE END POINT: QUALITY OF LIFE OF WOMEN SCIENTISTS

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Thesis Statement

To be most efficient and effective, resources directed toward bringing young women into scientific and engineering careers must be coupled with efforts to make the work environment one in which women scientists can thrive.

Introduction

A female postdoc in my laboratory was interviewing for jobs. When it became clear during one interview that her family would have to move halfway across the country if she took the job, the interviewer offered his view of the situation, saying, "I feel sorry for your husband." This company had a high representation of female employees, but most were in lab tech positions, and essentially none were in management.

In sharp contrast, a second company gave her a serious interview when she was clearly pregnant, convinced her that women were being aggressively recruited, had excellent options for modified employment patterns during the first year after a child was born, had women in management positions, and discussed possibilities for her own future advancement within the company. To top it off, lab employees offered to take care of her two-year-old during a planned tour of the facilities. She did not need their help, but the fact that they offered made a big impression.

Clearly, to be most effective, resources invested in recruiting women scientists and engineers must be coupled with programs in the workplace that help them make optimum use of their talents. I have been part of a serious effort at Argonne to work toward that end and will describe three areas in which we have invested our time, money, and human resources. These areas include (1) a survey of Argonne policies and practices as they affect women and minorities, (2) a new Women in Science Program Initiator (WPI) position, and (3) a Department-of-Energy-sponsored Review of Women's Programs hosted at Argonne for the first time in 1991.

1. Argonne National Laboratory Policies and Practices Survey

In 1988, Dr. Alan Schriesheim, Director of Argonne National Laboratory, appointed an ad hoc committee to evaluate Argonne's policies and practices of hiring, promotion, and employee development, particularly as they affected women and minorities. As a scientist and member of this committee, I played an integral role in determining the approach that was taken. It was clear that the survey would provide a way of evaluating the present as a first step to knowing how to change things for the future. To do this effectively, it was important that the survey provide quantitative information on Argonne's practices in addition to a qualitative view of the employees' attitudes toward those policies and practices.

A first step was knowing where the women were in the organization. At the time of the survey, 8% of the permanent R&D staff members were women, two-thirds of the 23 Divisions/Departments had very few R&D females, and most of the female R&D staff members were in the Biology (BIM), Chemical Technology (CMT), or Energy and Environmental Systems (EES) Divisions. These results showed that R&D females were a small minority group, that lab-wide networking among the female R&D staff could benefit those isolated in nearly all-male divisions, and that laboratory data on salary equity, promotion policies, etc., as they affected R&D women would largely reflect the actions of three Divisions.

During the five years just prior to the survey, Argonne hired 355 permanent R&D staff members. The committee looked carefully at this group because it would reflect closely the results of Argonne's recent hiring practices. It turned out that 43% of the R&D females on staff at the time of the survey were hired in the previous 5 years, potentially indicating a fairly high turnover of R&D females. For 150 of the 355 people hired, the committee identified all candidates considered, to be able to compare them with those who were hired. To our surprise, about half of all positions were filled with only one candidate interviewed. (More candidates were considered, but one candidate stood out as being most qualified, was interviewed, and was hired). To Argonne's credit, this happened nearly as often for female hires (42%) as for male hires (50%). In addition, when both male and female candidates were interviewed, a similar number of males and females were hired. These results indicate that Argonne was not giving token interviews to female candidates, that female candidates were being given serious consideration, and that efforts to increase recruitment of female candidates for jobs at Argonne would be worthwhile.

From this brief view of some aspects of the Argonne survey, one can see ways in which knowing an organization well from a quantitative standpoint can lead to a convincing formulation for change. Based on this survey, actions were recommended that would affect R&D women in the areas of recruitment, retention, promotion, management positions, committee representation, communication/visibility, and networking.

2. WIS Program Initiator Position

Features of Position. In 1990, a new position was established at Argonne, that of Women in Science Program Initiator (WPI). In practice, the establishment of this position gave formal recognition to the Women in Science (WIS) program at Argonne, provided financial backing to that support, and provided a sanctioned avenue for WIS input into laboratory programs.

The WPI position was established as a two-year rotating position covering 30% effort of an R&D staff member, with funding from the Office of the Laboratory Director. This level of effort was established because it would provide sufficient funds to the WPI's program to add a temporary member to her scientific staff, providing additional resources while she invested time in WIS responsibilities. The two-year term was deemed necessary to provide a reasonable period of coverage for the temporary employee. Having the WPI report to the Office of the Laboratory Director was considered critical because a number of organizations within Argonne were interested in obtaining input from the WPI (Affirmative Action Office, Division of Educational Programs, Human Resources); reporting to any one of those organizations would obligate the WPI primarily to that organization. In addition, value was placed on the visibility and credibility that the position would gain by having the WPI report to the Office of the Director. The rotating nature of the position meant that the WPI would work closely with Lab management but would not become a part of the management. By remaining on the R&D staff, the WPI would continue to be acutely aware of the issues and concerns of female scientists. Finally, it was decided that the WPI would receive guidance from a WIS Steering Committee, which would help set priorities and provide feedback when important decisions needed to be made.

Background. The concept of the WPI position started when WIS activities at Argonne, including conference planning, outreach, and career development tasks, increased in number and scope until the level became too great for effective implementation via volunteer effort. Important activities were left undone because of lack of a coordinated or designated effort, and input from female R&D staff was deemed critical. Consequently, an ad hoc group of Argonne women scientists developed a strategy that included establishment of the WPI position and began to negotiate with representatives of management. After one year of continuous interchange, the WPI position was established and candidates were enlisted.

A WIS Steering Committee was formed from the group involved in development of the WPI position, including representatives of the Office of the Director, the R&D women, the Division of Educational Programs, the Affirmative Action Office, and Human Resources; the WPI's supervisor was also included. The Steering Committee was therefore a committee not made up solely of women; rather, it was organized around the functional units within Argonne that were potentially impacted by, and interested in, the activities of the WPI. Having the WPI's supervisor

on the committee was important because his/her input and support for the WPI position was critical to its effectiveness.

Concerns. A number of concerns were raised regarding the nature of the WPI position by those involved in its establishment. First, the WPI would experience a change in funding status for two years. During that time, only 70% of the funds needed to support her position at the Laboratory would have to come from scientific program funds. The possibility was raised that the remaining 30% effort might no longer be available at the end of her term as WPI; the loss of scientific program funds might not always be recoverable.

Second, it was acknowledged that the time required to carry out the important tasks identified in the description of the WPI position could well be more than the time allocated for the position.

Third, there was concern regarding what measures should be applied to assessing the effectiveness of the WPI position. Upon what basis should a decision be made as to whether the position was a success or not?

Fourth, there was discussion regarding the extent to which the WPI would be able to initiate actions vs. coordinate them. The authority of the WPI to initiate relied solely on the support of Laboratory management. The possibility for conflicts was identified.

Finally, it was realized that the WPI provided representation for R&D females at the Laboratory but did not address issues of the non-scientific staff.

It was with these concerns in mind that the first term of the WPI was undertaken at Argonne on October 1, 1990.

Highlights of WPI Accomplishments, 1990-1992. By way of overview, my two years as WPI were thoroughly enjoyable. The relief that I felt at the start of my term was welcome as I applied my time and effort to WPI tasks and realized that I was being paid for them. I had not been aware (until it was gone) of the strain of trying to manage a scientific program and also contribute substantially to WIS initiatives on a volunteer basis. I looked forward to being able to pass on that relief to the next WPI.

Besides allowing me to accomplish specific tasks, the WPI position provided a central focus to the WIS program and the R&D women that was beneficial. It provided a natural means for interaction between R&D women and other programs within the Laboratory, such as Affirmative Action Program, Human Resources, Division of Educational Programs, Office of Public Affairs, and even individual employees or supervisors who had a need for input or information on WIS matters. It appeared that needs were met that otherwise would have gone unnoticed.

My contributions to outreach involved a major effort in planning the program of our annual Argonne-sponsored conference for 300 high school girls titled "Science Careers in Search of Women."

In the area of Communication/Visibility, at the request of Laboratory Director, Dr. Alan Schriesheim, I made presentations describing the WIS program and the WPI position to the Division Directors and Operations Managers at the Laboratory. Following these introductions, I was asked by several Division Directors to make presentations to their Group Leaders. These presentations were valued by female R&D staff members for the visibility they gave to the WIS program among Laboratory managers. They also resulted in my being contacted during the year by people who otherwise would not have known that the WPI position existed.

Activities that impacted WIS Career Development at the Laboratory included (1) coordinating Argonne's input into the first Department-of-Energy-sponsored Review of Women's Programs (see below), (2) coordinating R&D women's input to decisions regarding the affirmative action officer (AAO) position at the Laboratory and identification of a new AAO, (3) coordinating R&D women's input to changes in the Laboratory's leave policy related to pregnancy, and (4) negotiating settlement of a conflict for a female scientist.

With respect to funding, recruitment, and promotion, I helped to formulate strategies for a WIS grant proposal, identified sources of information on female job candidates, and recommended Argonne female scientists for a Management Development Course offered by the Laboratory.

It is clear that problems were resolved, opinions were voiced, and positive changes were made because the WPI position existed.

Transfer of the WPI Model. Shortly after the WPI position was established at Argonne, Lawrence Livermore National Laboratory negotiated for an analogous position and appointed their first WPI for a two-year term at 30% effort. At Lawrence Livermore, the WPI represents all women at the Laboratory. In response to my presentation at an NAS/NRC workshop, a staff member from one of the universities indicated that the WPI position made her realize that she might be able to obtain needed input into WIS activities from female faculty members by supplying part-time support for their salaries. On a volunteer basis, the jobs were not getting done.

3. Department of Energy Review of Women's Programs

Women scientists at Argonne, during discussions about the annual "Science Careers in Search of Women" conference that they help to plan, wondered how Argonne's outreach programs, aimed at encouraging young women to prepare for careers in science and engineering, compared to those sponsored by the other National Laboratories. The suggestion was made that the Department of Energy might sponsor

a Review of Women's Programs that would allow the women at the National Laboratories to compare notes on the outreach programs.

With the help of the Argonne Affirmative Action Officer and the Director of the Division of Educational Programs, contact was made with the DOE Office of University and Science Education, and the idea for the Women's Program Review found a sponsor. In November, 1990, the Department of Energy Office of University and Science Education, under Associate Director, Richard E. Stephens, held the first Review of Women's Programs at Argonne National Laboratory. Dr. Linda Cain organized the review, providing dedicated service through her able direction and coordination of efforts.

While planning the conference program, women scientists at Argonne again focused on their recurring theme that effort invested in bringing women into scientific and engineering careers, to be worthwhile, must be coupled with efforts to make the workplace environment one in which women scientists will thrive. Consequently, the Review was divided into morning sessions dealing with outreach programs and an afternoon panel aimed at identifying programs at the National Laboratories that enhanced the effectiveness of the current DOE women scientists. A survey of the status and programs of women scientists at the National Laboratories was initiated, and data from five Laboratories was compiled. A report of the Women's Program Review and its recommendations was published. Besides providing a means of comparing and identifying the best WIS programs at the National Laboratories and making recommendations for change, the Program Review succeeded in setting up a national WIS network for the DOE laboratories.

Summary

Three approaches have been initiated at Argonne that address the needs of R&D women at the Laboratory. These include (1) a detailed survey producing both quantitative and qualitative information on Laboratory policies and practices as they affect women scientists, (2) a new Women in Science Program Initiator position that supports WIS input to Laboratory programs, and (3) a DOE-sponsored Review of Women's Programs hosted by Argonne for the first time in 1990. Each of these approaches can serve as models for other organizations that are setting up programs to help them make optimum use of the talents of their female scientists and engineers.