Women in the computer sciences

Clare Rose
Sally Menninger Bolus
Evaluation and Training Institute

The past decade has seen a dramatic increase in the representation of women in the computer science field. During the 70's, women earned over 20 percent of the bachelor's degrees in computer sciences, compared to only 12.5 percent during the 60's. By 1978, women were receiving 25.8 percent of the bachelor's degrees and 18.7 percent of the master's degrees.

Private industry is attracting women with graduate degrees in the computer sciences by offering high salaries and strong career opportunities.

Although these increases are encouraging, women still have a long road ahead to travel in establishing themselves as professionals in the computing field, as shown in a recent study completed by the Evaluation and Training Institute for the National Science Foundation. This study focused upon the enrollment and academic employment patterns of women scientists and engineers in eight science and math fields, including computer science.

The ETI study revealed that, although an increasing number of women are receiving graduate training in these fields, many women entering the academic job market are receiving low-status, low-salary research positions rather than regular faculty positions. However, the study also indicated that private industry has initiated a concerted effort to attract women with graduate degrees in the computer sciences and other fields by offering high salaries and strong career opportunities.

If women are to continue to enter and find good careers within the computer science field, they will need special encouragement and attention. During their study, the ETI staff planned and participated in a program designed to foster that special type of attention—the Women's Career Day in Computer Science, held at the University of Southern California in October 1978.

The person chiefly responsible for the event was Ellis Horowitz, chairman of the Computer Sciences Department at USC. The ETI staff first met Horowitz during a visit to the USC campus as part of the NSF study of women scientists and engineers. Like many people the staff had met during their study, Horowitz demonstrated his concern for the status of women in the field by asking what he, personally, could do to help women interested or involved in computer science. The staff suggested that he sponsor a career day for women interested in the computing field. Since then, similar programs have been sponsored by NSF throughout the country to stimulate the participation of women in various scientific fields.

To the credit of Horowitz, work began immediately on implementing our suggestion, and on October 7, 1978, the Women's Career Day in Computer Science was held. To our knowledge, this was the first conference specifically in the computer sciences field offered for women. The conference was publicized through the press, and publications were sent to local colleges and high schools.

Several women working in the computer field in management and supervisory positions were recruited to present small group seminars on the problems and possibilities that women encounter in the field. For example, Betty Nimi of TRW discussed opportunities in technical management for women, Christine Montgomery of Operating Systems, Inc., described opportunities in small computer software, and Erica Rounds of Technology Service Corporation spoke on careers in computers and image processing.

Approximately 100 women of all ages and backgrounds attended the conference. Through small group discussions following the formal presentations, the ETI staff gained insight regarding the problems and questions of women who were either considering or had chosen careers in the computer sciences. For example, among young college women, an important question was whether having a career prohibited having a happy marriage. Many of these women believed that the successful woman computer scientist is single and has little or no social life. Meeting with women professionals in the field—all of whom were married—dispelled these fears.

Other participants holding clerical or secretarial jobs wanted to know how they should prepare for training and jobs in the computer field. Women graduate and undergraduate students in the USC computer science program explained the program's prerequisites and discussed their coursework and experiences in school. Seeing and talking with women involved in the computing field seemed to alleviate many of the doubts and fears of women who were considering the field.

Research into the career decision process for women suggests that meeting women employed in a particular job or field has a strong impact upon career choice. Conferences such as the USC Career Day can increase awareness among women of career options and help them to make these options a reality.