OPPORTUNITIES FOR WOMEN IN CHEMISTRY

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ABSTRACT

The number of women chemists is markedly increasing. At chemical meetings, four or five times as many are present as there used to be fifteen years ago. This explains the growing desire of these women to know what positions they may expect to fill.

A cursory study made of four lists of women chemists will present a fair view of a cross section of those who have been reasonably successful. The first list comprises forty-three women who were members of the American Chemical Society in 1903. Of these, twenty were listed then or later in "American Men of Science" as heads of departments, Home Economics heads, deans of women and a few outside of teaching. The second group is the three hundred and thirty women listed in the latest edition of "American Men of Science" who state their vocation as chemistry. Of these one hundred and ninety-six teach, eighty list their profession as research, medical research, government service or work in one of the Foundations, and approximately fifty are scattered in practically as many industries. In the American Society of Biological Chemists there are forty-five women who, like all the members, were elected by vote. Among them eighty-two per cent teach, fourteen per cent are research workers and four per cent are in industrial positions. The last group is the total of thirty-three women who have the Ph.D. degree from the chemistry department of the University of Illinois. The three Catholic sisters, the two Chinese students and the nine married women constitute a group whose occupations are settled. Of the remaining nineteen only five have left their first position and again the majority teach. From this information, it is evident that teaching is still the most likely field for a woman and that industry is difficult to enter.

The training needed, the access to the teaching field and its advantages are self evident and need little comment. However, an individual who enjoys chemistry almost always has a desire to do laboratory work. Opportunity in the latter type of endeavor is more uncertain since the industrial people rarely accept a woman. The most promising way to enter an industrial concern is through a side door. One door is secretarial work. When a woman has added to her chemical training a good secretarial course, she will have the tools for her position and know the language of the field. At first she will be paid no more than a stenographer, but she has a chance for promotion if she uses intelligence and discrimination. One former secretary is a personnel director, another is on the staff due to her enterprise in selling the products of the company when she was a secretary and a third is the right hand "man" of an editor. The second door is library work which is becoming increasingly important. One can receive real satisfaction in contributing indispensable aid to the men in the office, laboratories and plant. One such library research worker noted the importance of patents and has become a patent attorney. Library work leads to mention of the requisite knowledge of French and German and the merit of knowing other languages, particularly Russian.

Analysis of the situation shows it is advantageous to become proficient in some field where man's priority is traditionally not so completely accepted. Suggestions are X-ray, microscopy, micro-analysis, dyes, dry cleaning, foods, nutrition and textiles. The latter fields are wide open from the Home Economics and Consumer point of view. It is a point worth making that the woman who will study Home Economics and specialize in foods, nutrition and textiles is sure to find a po-

sition if she is a good student. A woman who has only a chemical background is not so easily assimilated in a Home Economics group.

A plea has been made from the Bureau of Home Economics at Washington that more women take the Civil Service examination for chemical positions. Among the great numbers who take these examinations, very few are women. More of them ought to be seriously considering this possibility and get their names on the eligible list.

A woman should enter the chemical field only if she is an exceptional student and insists upon doing it after she fully realizes the many difficulties which are a real handicap. She must compete with men in a man's field. While the physical and physiological factors are not so serious, as some try to imagine, the psychological ones definitely exist. As long as society proceeds on its present basis, a woman's emotions will minimize her obligations. If women are therefore less permanent, if they do not always do more than is required, if they cannot do as much as a man in the same time—all complaints that have been advanced—then the business man asks whether she does give back to the concern adequate return for value received.

Average professional women have no one to help them comparable to a man's wife. Women may grow dull due to overconscientiousness which is an asset at first but a liability if carried to the extreme where the neurotic woman is not adaptable to fellow workers due to her exacting continuous labor or overwork. Women are not trained from early childhood to develop mechanical ingenuity to create or repair equipment. Women still have to prove that their scholarly work will have the quality in recorded scientific history equal to that of great men. They have, of course, not had the centuries of apprenticeship in scientific and intellectual pursuits. They will have to be patient because at present men are likely to believe that they will not find scientific genius among the women.

The pessimism which the enumeration of difficulties promotes may be counteracted by remembering that women are considered excellent teachers, that they are more expert at fine work and mentally no different. If then temperament is to be a deciding factor against them, those women who will be chemists should be forewarned, look the facts over and steadily try to eliminate prejudice in the minds of their employers.

Many cases of women who have excellent positions might be cited to show from what poorly paid positions these women advanced to their present status. They were good chemists. They had perseverance, seized opportunity, made themselves indispensable and did not become submerged. There is no doubt that there are positions for a woman chemist who is above average but the mediocre had best not try to fight a situation so difficult.

For further reading on this subject there is a bibliography on women in Industrial Engineering Chemistry, News Ed. 14, 206 (1936). There was a symposium on the subject at the Boston Meeting of the American Chemical Society and the papers were published in the December 1939 issue of the Journal of Chemical Education. The Women's Bureau of Professional Relations held a symposium last April and a brief report is in *The Chemist*.