Book Reviews

Women and Work

When, in 1960, the staff of the Conservation of Human Resources Project undertook a questionnaire investigation of the career development of a group of fellowship winners, the original design included both men and women. But the researchers soon discovered—with a naiveté one would hardly have expected in this group—that the questionnaire, constructed by men and pretested on a largely male sample, was most inappropriate for women. They did not let it go at that but limited their first study to men and followed that by a separate study of women, now reported in **Life Styles of Educated Women**, by Eli Ginzberg, Ivar E. Berg, Carol A. Brown, John L. Herma, Alive M. Yohalem, and Sherry Gorelick (Columbia University Press, New York and London, 1966. 236 pp. $5.95). Their surprise is vivid testimony to the fact that the most accurate statistical tabulations may tell very little about the individuals so summarized. For the changing occupational *patterns* of women had been well documented, among others by Ginzberg *et al.* in *Womanpower* (*1*). What is lacking in reports that tell us how many women of various ages are working now is information about what these same women were doing in earlier years. It is only through longitudinal studies or such retrospective questionnaire studies as the one now reported that we can get at such data.

There are very few such studies even of men. Notable are the report on the male fellowship winners referred to above, which is used in a few comparisons with this sample of women, and the studies by Super and his associates (*2*). There have been two studies of women that are somewhat relevant to the one reported here. Mulvey's (*3*) sample of adult women was chosen from high school graduates, very few of whom had any higher education. Baruch's (*4*) thesis (unpublished) traced the life histories of a sample of Radcliffe graduates, and also analyzed career data from a national sample of women. Although very few of the Radcliffe sample had gone on for graduate education, their histories do not differ greatly from those reported in the volume reviewed here. Baruch found very considerable differences associated with education, however, a finding which reinforces Ginzberg's caution about generalizing from his sample.

Life Styles of Educated Women analyzes the reports of 311 women who had held graduate fellowships at Columbia between 1945 and 1951. The very special nature of this sample must be kept firmly in mind, most particularly (as indeed the authors concede, although I think they underestimate its importance) because career commitment is certainly stronger and more definite in women who have elected graduate study (completed or not) than in those who have not. The thesis of the book is that such women have never "had it so good," more specifically that the variety of options open to them has been uniquely large, compared to options previously available to such groups or presently available to men. But let us see—and particularly let us consider whether it is the availability of options or the willingness to choose among them that is the crucial point.

It is not really clear, from the author's quick review of changing census figures, just how great have been the changes for women with postgraduate education. Between 1930 and 1960, the percentage of women among all doctorate recipients decreased from 15 to 10, even though the percentages receiving B.A.'s and M.A.'s increased (*5*). The general increase of working wives and working mothers of young children is of relatively little relevance to Ginzberg's study, in view of the fact that 28 percent of his sample had not been married (compared with 6 percent in the population as a whole) and another 12 percent were widowed or divorced, and that 18 percent of those who had married were childless and an additional 14 percent had only one child. These comments are intended to emphasize the very special nature of this sample. (It should be made clear that the authors are meticulous in not extrapolating beyond their sample, but it is too much to expect that others will not do so.) The large number of single women in the group is of considerable interest, both for itself, and for its relevance to data on general satisfaction with life. The authors say, "It was largely up to them to determine whether they wanted to marry, when and whom, and whether they wanted a large or small family, or none at all." Perhaps the latter part of this statement is correct, although one might hope for a more equitable sharing by husbands in such a decision, but surely the options with regard to marriage are overstated. Indeed, later the authors do note that a woman does not marry unless she is asked to, and that there may be still some reluctance on the part of many men to court openly intelligent women. Who knows how true this is?—but that it may be true can act as a powerful (and reasonable) deterrent to many women's career aspirations.

The population of husbands, in this group, is as untypical as that of wives, with only 5 percent holding low-level jobs (*6*). Whether, on balance, the job options resulting from having a husband well able to support his wife and family (and willing for her to work) outweigh the concurrent geographical (and sometimes social) limitations remains moot, but it is only fair to note that options for husbands may be analogously affected by family considerations.

What elements affected the women's decisions to work? Although 60 percent of the sample said that their mothers' working or not working was not a factor, among those whose mothers had worked after marriage two-thirds saw this as having influenced them to do the same. In general, both parents gave encouragement to career aspirations. For anyone interested in predicting eventual professional use of graduate training, data on the woman's own anticipations (as seen by her later) may be as suggestive as the data on parental attitudes even if this is just another self-fulfilling prophecy. In brief, "Those who anticipated that their careers would take precedence over marriage and family largely followed through on their plans and now work full-time, while those who did not think they could fit family and career together spent the least time in work."

At the time of the study 62 percent

of the women were employed full-time and another 13 percent part-time. Their overall achievement levels (based on salary, prestige, and the like) show 48 percent at High or Good and the rest at Fair or Low. Some techniques for accommodation of family and occupational lives are delimited and presumably more will be detailed in a second volume yet to be issued (*7*). I would draw somewhat different inferences from those the authors draw from their data on sources of satisfaction, but this may in part be because of the somewhat confusing presentation. They found no relationships between overall satisfaction with life and work pattern, or achievement level, but my guess would be that the degree of overall satisfaction is a reflection of the degree of self-actualization felt (which is more importantly related to work for some than for others), and this is too individually varied to appear clearly. In Mulvey's group, overall satisfaction was more consistently related to marriage than to anything else, but this does not hold for these women.

It is not feasible to comment here on a number of other aspects reported in the study (such as fields of work, fields of academic concentration, community activities), but mention must be made of the categories the authors have developed for "life styles" (which "do not reflect any preconceived social or psychological theory"). These are (i) *individualistic* (with emphasis on self-direction and self-determination), 52 percent; (ii) *influential* (strongly motivated to make an impact on others), 10 percent; (iii) *supportive* (basically oriented to service to others), 29 percent; and (iv) *communal* (committed to a religious, ideological, or political systems), 9 percent. These categories are related to working and nonworking and to personal values as would be expected.

Throughout there are many rich insights both in the authors' comments and in the numerous quotations from their subjects, and their discussion of the role of work in women's lives (and their limited comparisons with men) as well as the implications for social policy should not be abridged. They return to their theme of increasing options, which they note as also increasing, but laggingly, for men. They do not, however, deal with a problem which is becoming more and more apparent to those concerned with career studies and career guidance—that a wide array of options is only advantageous to the extent that they are clearly perceived and that active weighing of alternatives can be done and rational choice from among them can be made—a skill not widely developed (*8*).

This careful study is a most welcome counteractant to the flood of books and papers bewailing the sad lot of womankind. Perhaps a time is in sight when society will have learned to use the talents of all its members and to exploit individual and group differences rather than to minimize or deplore them.

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References and Notes

1. National Manpower Council, *Womanpower: Work in the Lives of Married Women* (Columbia University Press, New York, 1958).
2. E. Ginzberg and J. Herma, *Talent and Performance* (Columbia University Press, New York, 1964). D. Super and his associates have been studying the career histories of a group of 280 boys over the past 15 years; see D. Super *et al.*, *Vocational Development: a Framework for Research* (Teachers College, Columbia University, New York, 1957). For a report on changes in occupations of 804 men over spans of 16 to 22 years, see A. Roe, W. D. Hubbard, T. E. Hutchinson, T. Bateman, "Studies of Occupational Histories, Part I: Job Changes and the Classification of Occupations," *Harvard Studies in Career Development No. 45* (Center for Research in Careers, Graduate School of Education, Harvard University, Cambridge, 1966).
3. M. C. Mulvey, "Psychological and Sociological Factors in Prediction of Career Patterns of Women," *Genet. Psychol. Monographs* **68** (2), 309–386 (1963).
4. R. W. Baruch, "The Achievement Motive in Women: a Study of the Implications for Career Development," Ph.D. thesis, Graduate School of Education, Harvard University, 1966.
5. See A. Roe, "Women in science," *Personnel and Guidance J.* **54**, 784–787 (1966), for discussion of the situation in these fields.
6. One would guess that the mean income is also relatively high. As with a number of the statistical details, the presentation is not very satisfactory for comparative purposes. Here, for example, no mean is reported—only that one-fourth earn less than $10,000 and one-fifth earn more than $20,000.
7. To be called *Educated American Women: Self-Portraits*.
8. See, for example, A. Roe and R. W. Baruch, "Factors Influencing Occupational Decisions: a Pilot Study," *Harvard Studies in Career Development No. 32*; and D. V. Tiedeman and E. D. Morley, "Guidance and Vocational Competence: A Theory for Ideal Practice," *Harvard Studies in Career Development No. 43* (Center for Research in Careers, Graduate School of Education, Harvard University, Cambridge, 1964, 1966).

A Pioneer in Astrophysics

More than any other individual, George Ellery Hale was responsible for the 20th-century boom in astrophysics. His creative genius, which turned to the design of instruments and establishing scientific organizations and large observatories, has been commemorated in the spectroheliograph, the International Astronomical Union, and Mount Palomar's 200-inch Hale Telescope. In the biography **Explorer of the Universe** (Dutton, New York, 1966. 480 pp., illus. $10) Helen Wright gives a detailed account of the life and almost frantic activities of this remarkable scientific leader.

As a young astronomer at the Yerkes Observatory 25 years ago, I heard and retold many stories about Hale—the man who at the age of 24 persuaded C. T. Yerkes to borrow half a million dollars to build the largest (40-inch) refractor in the world, and then moved on in ten years to build the Mount Wilson Observatory. Now I find many more stories resurrected from the vast file of Hale's papers at Caltech—stories of the undergraduate Hale disliking the grind at M.I.T., "barging in" on E. C. Pickering at Harvard, Rowland at Johns Hopkins, Young at Princeton, William Huggins in London, and Deslandres at Meudon, and weathering a storm on Pikes Peak in 1893. What's more, this book sheds light on the fortunate combination of circumstances that led to Hale's accomplishments.

Wright carefully sets Hale's life in historical perspective, relating it to such events as the Chicago fire of 1871 when Hale was 3 years old, prosperity in the 1880's, the depression of 1893, developments in physics and astronomy, the war years 1914–1918, and the roaring twenties. She recounts in great detail some of the less significant personal events in Hale's life, but generally she succeeds in showing his vast personal strength. In a few paragraphs she gives the background and personality of each of the many renowned scientists Hale met, and the descriptions of these meetings indicate the overpowering personality and infectious enthusiasm of the central character.

Part of Hale's influence undoubtedly derived from his early interest in optics and technology, which made possible his applications of the new physics in the old science of astronomy. Of course, in 1890 the time was ripe for shifting emphasis from where things are in the sky to what the things are like—what composition, how hot, in what magnetic field, how moving. Other scientists, such as Pickering, Huggins, and Lockyer, had similar ideas, but this biography shows that a second happy circumstance, an economic one, gave Hale far better opportunity to exploit his youthful interests. The prosperity of