

THE PROFESSIONAL SCIENTIST, by Anselm L. Strauss and Lee Rainwater (Aldine Publishing Co., Chicago, Ill., 282 pp., 1962, \$6.00). The book is attractively bound and well-printed, and is subtitled, "A Study of American Chemists." The copyrighters, Social Research, Inc., were employed by the American Chemical Society "to make an important survey of ACS members' opinions on professional matters." The book is addressed to all professionals, to research and personnel administrators, to sociologists and industrial psychologists, and to those who would be alert to the need of attracting young people to science as a career. The book has three Parts, of four chapters each. Part I lays out the framework for the study, and the division of chemists into specific groups. Part II considers the social backgrounds of chemists, and the various facets of a chemical career. Part III considers chemistry as a profession, and the general nature of a profession. A profession is defined as an occupation that requires specialized knowledge, and displays both devotion to public service, and awareness of public image.

Inasmuch as this is an ACS survey, the source of employment makes an objective look at the ACS, the professional chemist's society, somewhat difficult, since it would render *non grata* any views contrary to ACS policy. Few such views are expressed. A non-member of the Society is pictured as one who does not regard himself as a genuine scientist, is "not yet good enough" to join. The Society is generally considered at least the minimum professional association, and it even has symbolic significance, providing to the rank and file a sense of belonging, and a sense of participation with the outstanding men in the expansion of the frontiers of science.

The authors assembled their material by means of a questionnaire sent to chemists (2789 tabulated), supplemented by planned interviews with 148 chemists, and by interviews with small numbers of men in other walks of life. These groups were often too small. Some of the discussion in Chapter 11 is based on panels of 28, 68, 75, and 25 persons in individual instances. These data are analyzed in the framework of the authors' views on the modern development of professions, on which Mr. Strauss has published elsewhere. The chemist, following Stein, is considered as a scientist, a professional, and an employee. Scientist is distinguished from professional in this way: "Among such a small band of scientists as those in astronomy in this country, there can scarcely be any concern with professional status. When a field expands, producing great numbers of scientists many of whom enter industry, then . . . the scientists begin to become aware of themselves as *professionals*. Psychologists have followed this path, and physicists appear to be taking it; chemists have long preceded both."

Chemists are placed in the two cate-

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gories of academic and non-academic, and in the three hierarchies of bench chemists, administrators, and researchers of high-level training. Chemists are optimistic about the future of chemistry as a science, are less enthusiastic about the chemical profession, and not optimistic about their own chances of scientific success. They feel that industry has taken too big a place in the direction of research, resulting in loss of autonomy for the researcher to plan and do his job, even though there is almost universal satisfaction with the accouterment of research today—physical equipment, libraries, opportunities to participate in scientific meetings, and possibilities of publishing. Specialization is tending to produce loss of contact among all chemists. Unifying influences are common education, common language, and the general society of all chemists, the ACS. Other important subjects discussed in the book are family history, recruitment into chemistry, the "publish or perish" formula in the universities, government in research, teamwork in research, how chemists and others see chemists and chemistry in relation to the other professions.

The analysis of the strains of a chemical career is of interest. There is, in the early years and the first and second jobs, a period of disillusionment, a scal-

ing down of aspirations. This scaling down represents exactly the distance by which the man falls short of being a true scientist—a man who finds, proves, and publishes Truth. The chemists turn to administration as the most attractive alternative. In this work, new strains develop as the administrator moves farther and farther from chemistry in his dealings with people, and finally becomes a supra-professional.

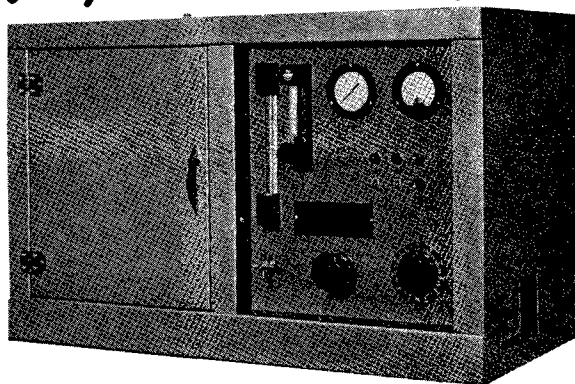
The book is close to making this point, that we are now back to the old Greek position, where the man who works with his hands is a lesser being, a mere artisan, in contrast to the Thinker. But in the well-recognized professions of medicine, the law, and the ministry, and in teaching, the real or figurative laying on of hands is still by the professionals themselves.

The subject matter of "The Professional Scientist" is of interest to AOCs members, and, indeed, to all chemists. The book can be read with profit for its analysis of the work the authors have done, remembering the inherent bias regarding the ACS itself. With this reservation, this reviewer recommends the book. The subject of the chemist as a professional needs more consideration. If this book can needle toward needed reform, good!

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