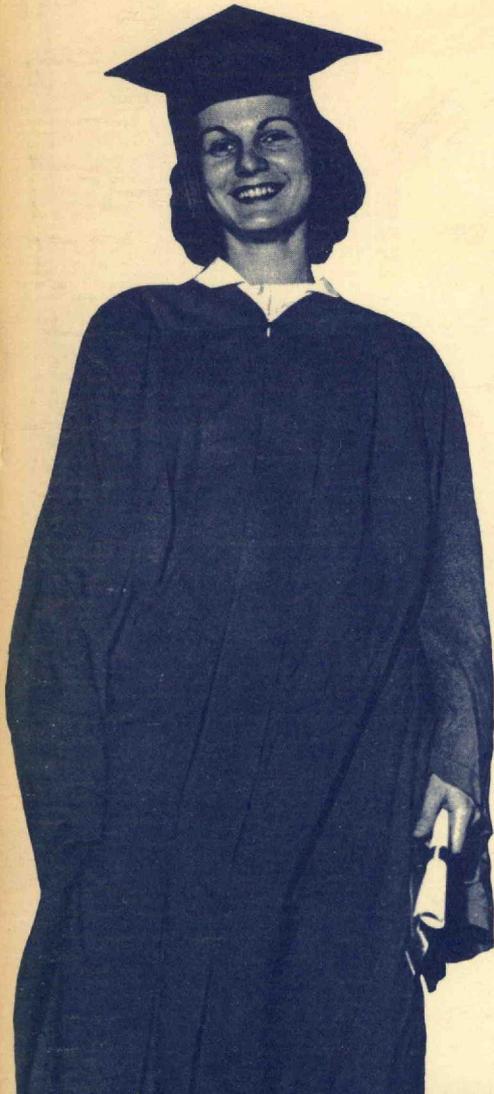


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# Job Horizons for College Women

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Bulletin 288 (Revised)

U.S. DEPARTMENT OF LABOR  
WOMEN'S BUREAU

1967

Job Horizons  
for  
College Women



**U.S. DEPARTMENT OF LABOR**

**Willard Wirtz, *Secretary***

**WOMEN'S BUREAU**

**Mary Dublin Keyserling, *Director***

**Bulletin 288 (Revised)**

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## FOREWORD

With the widening of job horizons, there is an important and growing need for the talent, imagination, and dedication of educated women. The possibilities, extending beyond the traditional professions for college women, have improved their opportunities for employment in a far wider range of challenging careers than was true for any previous generation.

We seek in this publication to alert today's college women to the wide range of opportunities now open to them. In planning for the future, they think generally of employment as well as marriage. Too often, however, their decisions regarding occupational choices may be based on obsolete ideas or unreliable hearsay and made in a haphazard fashion. Much helpful information is available, however, to those who seek it.

This publication highlights the salient facts about a variety of professions—to encourage thoughtful consideration of many job fields before selecting the one most appropriate to individual talents and interests. Information was obtained from several sources, including the 1966–67 edition of the “Occupational Outlook Handbook,” that point up items of particular interest to college women. The handbook, a publication of the Bureau of Labor Statistics, is available in most college libraries and counseling offices, and may be consulted for additional details about more than 700 occupations. Other sources of information are cited throughout this publication, especially under “Sources.” It should be noted that in the Federal service, entrance salaries may be higher in occupations where persons of required professional skills are scarce.

This publication was prepared in 1964 by Rose Terlin, then Chief of Employment Opportunities Branch, under the direction of Jean Wells, then Chief of the Division of Research and Manpower Program Development. The current revision was prepared by Lillian Barsky, of the Division of Information and Publications, under the general direction of Rose Terlin, Chief of the Division of Economic Status and Opportunities.

MARY DUBLIN KEYSERLING,  
*Director, Women's Bureau.*



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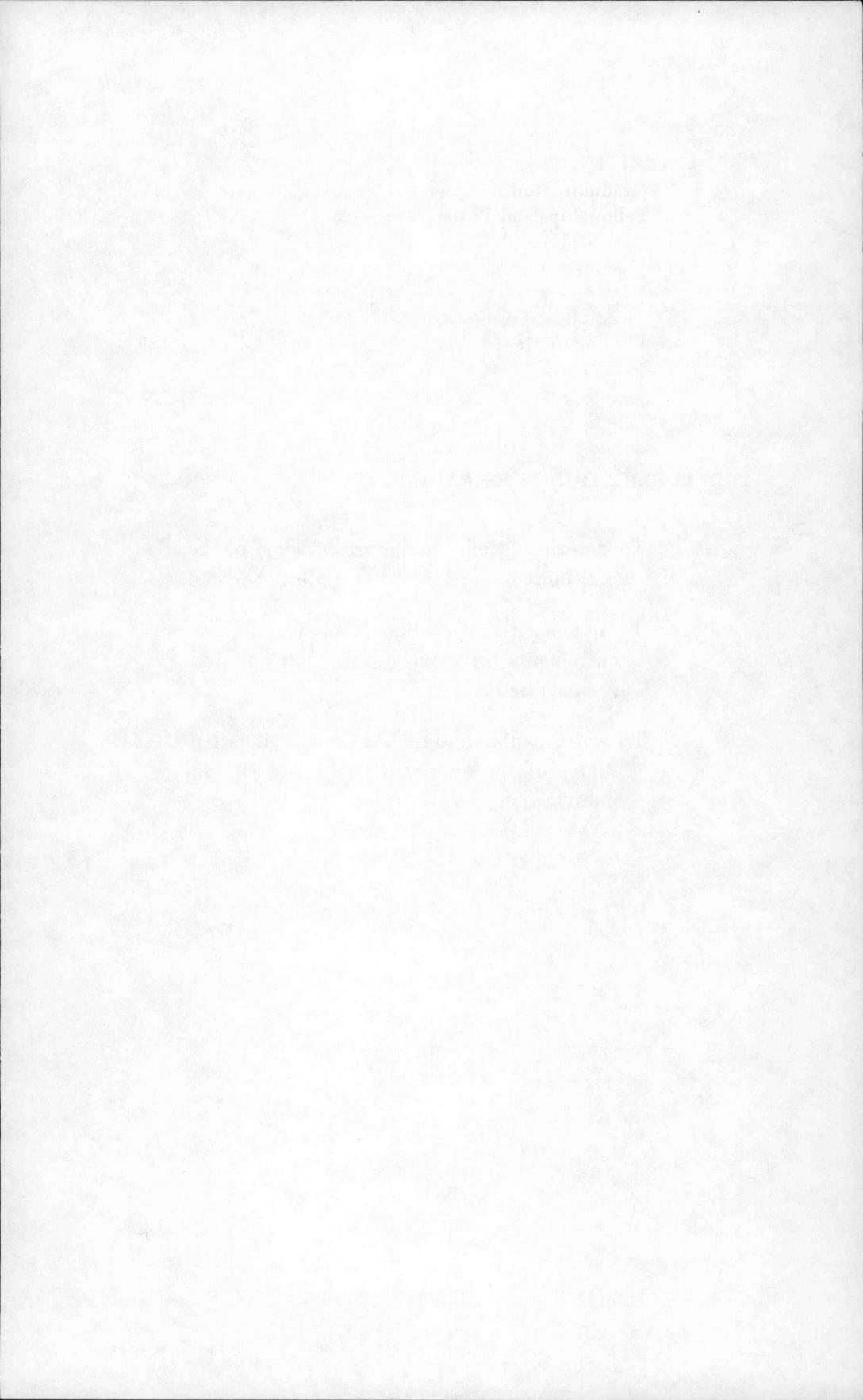
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**THIS PUBLICATION IS INTENDED**

To describe briefly the nature of some of the multitude of careers open to college women.

To indicate the educational and training requirements for entry into the various professions described.

To point to the resources for more detailed study of occupational fields of major interest.

# I

## INTRODUCTION

Some girls decide early in life that they want to concentrate on a specific field of study and work. For most, however, plans about future activities are not clearly defined and eventually may be decided much more by chance than by personal choice. Since the time spent at study and work may require a goodly portion of a woman's lifetime, it is to her advantage to be as realistic and far-sighted as possible in choosing college courses and setting future goals.

The college woman will want to begin with a plan. She will need to discover her own abilities, aptitudes, and temperament, and to identify the fields which arouse her curiosity and challenge her thinking. Whether or not a woman ever works, her education is important to her own satisfaction and sense of achievement, as well as to the Nation and to humanity. Moreover, her education is important for everyday living. A sharpened intellect and a wider knowledge of the world open possibilities for a richer, more satisfying personal life. A good education can increase her contribution to family life by extending and deepening her understanding, her sense of values, and her family goals. It also can make her more aware of her responsibilities to her fellow men and to the need for using her talents in a meaningful way. A well-educated woman may make a contribution to society in one or more of several roles—as wife, mother, worker, volunteer helper, and citizen.

Today many young women work a few years after college, and then leave the labor force when they marry and have children. When their home responsibilities lessen, they again seek paid employment. This period of paid employment is usually for a longer time than women worked in the past.

With the strong likelihood, therefore, that a college woman will find it necessary or desirable to have a paid job sometime during her lifetime, it is important for her to prepare for work she will enjoy

doing. A well-chosen professional job may be highly rewarding, for it can bring numerous satisfactions: participating with others in a creative task, advancing to positions of greater responsibility, and providing a vital service to society.

It is important also to consider the wide choice of career possibilities, not just those traditional for women. Never have job horizons for college-trained women been wider than they are today. Continued shortages of professional workers are projected not only in the traditional fields of nursing and teaching but also in science, engineering, mathematics, and medicine—among others. In many of these last-named professions, longstanding prejudices against women workers are diminishing, largely because of the great demand for qualified workers and the competence which women have shown in these fields.

In these days of great technological and social change, it is wise to acquire skills that can be used by a variety of employers. No one can predict accurately all of the specific occupations that will be most in demand in the future. The content and responsibilities of many jobs are changing; during the worklife of individuals some occupations will become obsolete and new ones will appear. Vocational versatility and adaptability—based on preparation for several alternative possibilities relating to a primary skill—will be indispensable in the job market of tomorrow.

Young women who hope to participate in satisfying and rewarding employment opportunities of the future must obtain skills in demand by employers. In every occupation described in the next chapter, additional rewards—in the form of more interesting and creative work, advancement, and higher earnings—may be realized from postgraduate study. Career planning, therefore, should encompass continuing education and, if possible, study toward advanced degrees.

## CAREER SUGGESTIONS

Since the full range of professional occupations open to college women is very extensive, this report covers only some of the largest and most promising. The 32 professions selected for description include such traditional fields as nursing and teaching; some rapidly expanding fields, such as engineering and science; and some relatively new fields, such as computer programming. Other professional fields not described that offer challenges to interested and qualified women include:

architecture	photography
commercial art	psychology
dentistry	public relations
optometry	veterinary medicine

A recent college graduate can expect to start as an assistant or junior professional. Advancement to positions of greater responsibility, satisfaction, and financial reward requires considerable experience and, frequently, advanced study.

### ACCOUNTANT

Accounting, a profession with a history that extends at least as far back as the ancient Babylonians, has attractions for many college women today. As the financial operations of business, industry, and government have grown in complexity and importance, the demand for accountants has increased. Between 1940 and 1960 the number of women employed as accountants and auditors more than quadrupled. In early 1967 about 10 percent of all accountants were women.

Geographically, the opportunities in this profession are widespread. Accountants may be found in every city and town in the country—in nearly every kind of private and public establishment.

This factor can be of particular interest to married women who have aptitude for this type of work.

Accountants have responsibility for devising, installing, and supervising general accounting budgets and cost systems. They periodically balance the books of an individual or a firm, and prepare statements showing such items as receipts, disbursements, and profit and loss. When requested, they must be able to give analytical descriptions of their financial reports and statistical records to administrative officers or others in authority. They also prepare tax returns.

Some accountants specialize in a particular area of accounting, such as auditing, cost accounting, tax work, or budgeting. Others concentrate on a specific type of business, such as public utilities, banking, manufacturing, or nonprofit agencies.

Nearly three-fourths of the women accountants work for private business or industrial firms. About one-fifth work for government agencies—Federal, State, or local. The remaining women accountants are engaged in public accounting, either as employees of independent accounting firms or as accountants working for themselves.

Women and girls who are interested in accounting as a career are advised to complete 4 years of study in a college or university that offers a major in accounting. A number of these institutions assist students in starting their careers by conducting internship programs in cooperation with public accounting or business firms.

The highest level of professional skill in accountancy is that of certified public accountant (CPA). Candidates for the CPA certificate must meet various qualifications, including several years of employment in accountancy and successful completion of a State certifying examination. In recent years, approximately 90 percent of successful CPA candidates have been college graduates.

Starting salaries of accountants with college degrees and majors in accounting averaged about \$7,300 a year in 1966, according to a private survey of over 100 large business organizations. Smaller firms generally pay somewhat less. The entry salary for junior accountants and auditors in the Federal service was \$6,211 a year in mid-1966. Those with superior academic records started at \$7,090.

For those with a master's degree, entry salaries ranged from \$7,090\* to \$7,957 a year.

## **BANK OFFICER**

Women bank officers include presidents, vice presidents, treasurers, comptrollers, and cashiers. In 1967 banks employed about 140,000 officers, of whom about 10 percent were women.

The National Association of Bank-Women, Inc., reported that in January 1967 the larger banks had more women officers than the smaller ones, and banks in the East had a greater number of women officers in all positions. During the past 10 years there has been a definite trend toward increasing the number of women promoted to officer positions. Women officers employed in large banks were more likely to specialize in one type of work, such as trusts, credit investment, real estate, personnel, or public relations. However, most women assistant cashiers performed work that involved numerous functions of the bank.

The number of women holding top positions in banking is expected to increase through the mid-1970's as banking activities expand. The opening of new branches in suburban areas and the expansion in banking services are contributing to this growth.

Most women who become bank officials first have proved their worth in such staff jobs as credit analyst, investment analyst, or note teller. Some have advanced from supervisory positions.

In recent years, banks have turned to college graduates as their principal source of officer trainees. Many send representatives to college campuses to recruit members of the graduating class for their executive training program. They frequently indicate that they prefer graduates of a liberal arts curriculum who have had courses in economics, political science, and commercial law, rather than graduates of a more highly concentrated business administration curriculum.

Most large banks have well-organized officer training programs, usually ranging from 6 months to 2 years in length. Specialized train-

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\*This was the starting salary for graduates with a 1-year 30-semester-hour master's degree; the starting salary for those with a 2-year 60-semester-hour master's degree was \$7,957 a year.

ing needed for bank work is obtainable from courses offered by the American Institute of Banking, graduate schools of banking, and State and regional instruction programs. Many banks pay the tuition of their employees who enroll in these courses.

## BIOLOGICAL SCIENTIST

Biological scientists, sometimes called "life scientists," study the structure and life cycle of living organisms. Specialization is inevitable, given the enormous variety of plants and animals and the complexity of their life processes. The many specialists may be grouped into three broad classifications: botanists (plant scientists), microbiologists (who work with micro-organisms), and zoologists (animal scientists). The main fields of employment of biological scientists are teaching and research. In 1966 the National Science Foundation (NSF) reported that an estimated 11 percent of biological scientists were women. The largest number specialized in microbiology, biochemistry, botany, zoology, and physiology.



Biologists engaged in research develop disinfectants to kill bacteria on fabrics.

Whether biological scientists engage in basic or applied research, they perform many similar duties and utilize the same fundamental techniques. These include making and staining tissue sections, classifying and identifying specimens, and using microscopes and other laboratory equipment. Knowledge of some mathematical and statistical procedures also is needed to organize and analyze the data gathered.

Most jobs in *basic* research, which seeks to add to the world's fund of scientific knowledge, are in the Federal service, universities, nonprofit institutions, foundations, and increasingly in private concerns. Jobs in *applied* research, which applies known facts to immediate problems, are found in hospitals, public health laboratories, government agencies, commercial research firms, and such industrial firms as drug manufacturers and food processors.

The majority of women biologists are teachers in high schools and universities. Generally, a bachelor's degree is required for teaching high school biology, but a master's degree is necessary for advancement. Increasingly, a doctorate is needed in the field of biology. Biology professors in universities, most of whom have their doctorates or are preparing for them, usually engage in research work as well as teaching.

A small number of biologists are employed in quality control testing to maintain legal standards for purity and potency. Writers and editors who have training in biology sometimes work for science magazines. Others report scientific developments for newspapers, or prepare television and radio scripts or company catalogs and brochures, or write for professional journals. Women with both library and biology training are employed by the Federal Government, medical schools, large public libraries, and large pharmaceutical firms.

New fields for biologists are the depths of the sea to study the effects of radiation on marine life, and the expanse of space to observe the micro-organisms and various life forms found on other planets. The potential benefits and dangers that these new fields can bring mankind will heighten the challenge and excitement of this work.

The median annual salary of women employed full time in the biological sciences in 1966 was \$9,200, according to the NSF.

In the Federal service in mid-1966, biologists with a bachelor's degree and no work experience started at \$5,331 or \$6,451 a year, depending on their qualifications. Those with 1 year of graduate work started at \$6,451, and those with 2 years of graduate work, \$7,696.

## COUNSELOR

Most professional counselors are specialists. The largest number are employed as school counselors, vocational counselors, and vocational rehabilitation counselors. There are also some marriage counselors, life-adjustment counselors, and other specialists who need particular skill and training to qualify for their field.

### *School counselor*

School counselors are concerned with students' educational and vocational goals as well as their adjustments to school environment. The number engaged in this work and the scope of their activities have been increasing recently. In the school year 1965-66, more than 25,000 full-time counselors were employed in public secondary schools. In addition, many teachers provided counseling services during part of their worktime. About one-third of all high school counselors are women.

During a typical day, a high school counselor engages in a variety of activities. She may, for example, analyze the results of aptitude and psychological tests she has given previously and relate them to the academic and medical records of students to be interviewed that day. The students who plan to go to college may desire assistance in selecting a school and applying for admission. One who has returned to school after a period as a dropout needs help to arrange his curriculum so that he can get a job after graduation. Before meeting with the students, the counselor often speaks with their teachers and sometimes with their parents. After all the day's interviews are over, she may start planning for a career-day program, intended to inform students about the kinds of jobs available in their community.

In addition, school counselors may give students leads to jobs—either part-time or permanent. In this effort, as in all their work,

counselors deal with all types of young people—the talented as well as the dropouts.

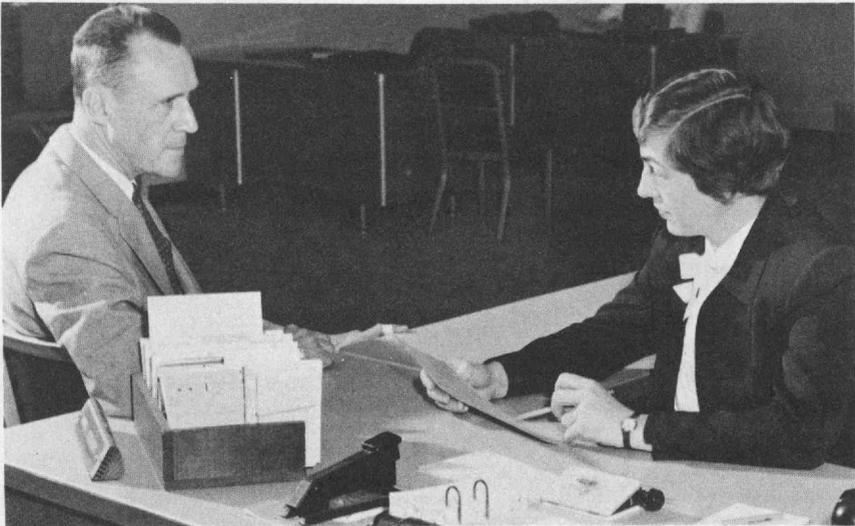
College students who plan a career in school counseling usually take a regular program of teacher education, with additional courses in psychology and sociology. All school counselors are required to have a State teaching certificate and, in most States, a special counseling certificate as well. Many States issue a special certificate only to those with master's degrees or the equivalent in counselor education, and with several years of teaching experience. In many States at least 1 year of work experience outside the teaching field also is required.

In the 1965–66 school year, the estimated annual average salary of school counselors was \$8,000.

### *Vocational counselor*

Vocational counselors are concerned primarily with an individual's vocational goals, job placement, and work adjustment—in light of his aptitudes, education, and experience.

By far the majority of vocational counselors work in State employment service offices. In 1966 those employed full time numbered approximately 2,780, and those employed part time, 1,480. In addi-



Women fill an increasing number of positions as vocational guidance counselors.

tion, about 1,500 vocational counselors worked for private or commercial placement agencies.

The minimum education required for most vocational counseling positions is a bachelor's degree. A major in one of the social sciences is preferred—plus courses in psychology, personnel administration, education, or public administration. Some State employment services require at least 15 semester hours in counseling courses.

The annual average salaries for vocational counselors in State employment service offices ranged between \$6,400 and \$11,000 in mid-1966. Some voluntary agencies in large cities indicated trainees were hired at about \$5,500 a year; annual salaries reported for experienced counselors ranged up to \$15,000 or more in 1966.

### *Vocational rehabilitation counselor*

Rehabilitation counselors work with the physically and mentally disabled. Although they spend most of their time advising disabled persons about employment, they also engage in some personal counseling, particularly concerning the workers' disabilities.

Every State provides a rehabilitation program, financed cooperatively by Federal and State funds. In 1967 about three-fourths of the 6,700 full-time rehabilitation counselors worked in State and local rehabilitation agencies. The U.S. Veterans' Administration also employs a significant number of counselors, most of whom are psychologists. Other employers are hospitals, labor unions, insurance companies, special schools, and sheltered workshops. An estimated 20 percent of all rehabilitation counselors are women.

According to the U.S. Department of Health, Education, and Welfare, the beginning average salary of rehabilitation counselors employed in State agencies in mid-1966 ranged between \$6,500 and \$8,200 a year. Counselors with a doctorate in psychology working with the disabled in the Veterans' Administration were hired in early 1967 at annual salaries ranging generally from \$9,200 to \$17,100.

In mid-1966 the Federal Government hired rehabilitation counseling trainees at \$6,451 and experienced counselors at \$7,696 or \$9,221 a year, depending upon their qualifications and experience.

## DIETITIAN

The main responsibilities of a dietitian are planning and supervising the preparation and serving of appetizing and nutritious meals, and thus helping people to maintain or recover good health. Day-to-day job duties include planning menus or special diets, supervising food personnel who prepare and serve meals, managing purchases and accounts, and promoting good eating habits. A specialist among dietitians is the nutritionist, who is concerned mainly with investigating the processes through which human beings utilize food, ascertaining the food elements essential to maintaining the best health and how these elements are transformed into body substances.

Of the approximately 30,000 dietitians employed in 1967, more than 90 percent were women and about half worked in hospitals. Others were employed by colleges and universities; school food-service programs; company-operated cafeterias; commercial restaurants, tearooms, and cafeterias; camps; homes for children or the aged; airlines, steamships, and railroads; government agencies; and private research firms.

There is considerable demand for well-trained dietitians. Not only do hospitals, industrial and business firms, and commercial eating establishments require more dietitians to supervise their food programs, but also many more dietitians are needed to teach dietetics and to conduct research programs in various aspects of the subject.

A young woman who is especially interested in food and homemaking may select dietetics as her career goal. She may begin her instruction by taking courses in food preparation in high school. For professional employment as a dietitian, however, she needs a college degree, including courses in food and nutrition, institution management, chemistry, bacteriology, and physiology—plus 1 year as a dietetic intern in one of the 64 internship programs approved by the American Dietetic Association. Internships are conducted in hospitals, business firms, colleges and universities, and nutrition clinics. Three years of experience, 2 years of which are under the supervision of a dietitian who is a member of the association, may be substituted for the internship.

New graduates of approved internship programs were employed by hospitals at salaries ranging from \$6,000 to \$6,500 a year in

1967. Staff dietitians in college and school food-service programs earned from \$6,000 to \$8,000 a year. In the Federal service the beginning rate for dietitians who had completed 1 year's internship was \$6,451 a year in mid-1966.

## **ENGINEER**

The steady demand for engineers has stimulated the interest of many employers to hire qualified women in this field. Although women still make up a small proportion of the profession, they are increasing in numbers and are represented in all engineering fields. The specialties in which the largest numbers of women are employed are industrial, electrical, civil, and aeronautical engineering.

Engineers provide technical leadership in developing new products and processes, designing machines and structures, and contributing in many other ways to technological progress and national defense. In addition to the large groups of engineers doing production or research work, others are engaged in drafting, analysis, or the testing of various products and processes. Those with considerable experience may work as independent consultants or for consulting firms.

With many new phases of engineering being developed, there are expanding job opportunities for constructive and creative work. They may relate to urban redevelopment and reconstruction; creation of new textiles and products from wood and synthetic materials; redirection or adaptation of water resources (with consequent implications for industrial power, agricultural production, and recreation facilities); new methods and resources of mineral extraction; and development of nuclear and solar energy for power and heating purposes.

A bachelor's degree in engineering usually is accepted as the minimum requirement for beginning jobs in the field. Certain jobs are available only to those with advanced degrees. In mid-1966 the number of universities and engineering schools offering degrees in engineering totaled about 265. Engineering courses in coeducational institutions generally are open to women.

Recent developments in science and engineering have made it especially important for a prospective engineer to have a good back-

ground in mathematics and the physical sciences. Therefore young women considering a career in engineering should obtain intensive training in these subjects, as well as in engineering.

The average (median) entrance salary for inexperienced engineers with a bachelor's degree was about \$8,300 a year in mid-1966. Those with a master's degree generally earned from \$1,000 to \$2,000 more a year. Those with a bachelor's degree in engineering entered the Federal service in mid-1966 at \$6,387 or \$7,729 a year, depending upon their college records. For those entering with a master's degree, salaries ranged from \$7,729\* to \$8,479 a year.

## HOME ECONOMIST

A degree in home economics can lead to a wide variety of career opportunities in such broad areas as food, clothing, child development, family relationships, home equipment, housing, interior design, home management, institutional management, and nutrition—depending upon the particular interests and abilities of the graduate.

The largest single group of home economists are teachers—mostly in secondary schools. Others teach in adult education programs or in colleges or universities; and a few, specializing in child development or family relations, teach in nursery schools, kindergartens, recreation centers, or other institutions.

For the young woman who likes to work directly with people, a career as an extension service worker will provide the opportunity to help an entire community—men, women, and children—work toward a better life. Her background and abilities must be varied, for she must be competent not only in nutrition, clothing construction, and food preparation, but also in such fields as money management and community organization.

Job possibilities in private business firms also are open to qualified home economists. Department stores and specialty shops hire home economists to work as fashion consultants, bridal consultants, fashion coordinators, and buyers, as well as for advertising and public relations work. Women who specialize in design, textiles,

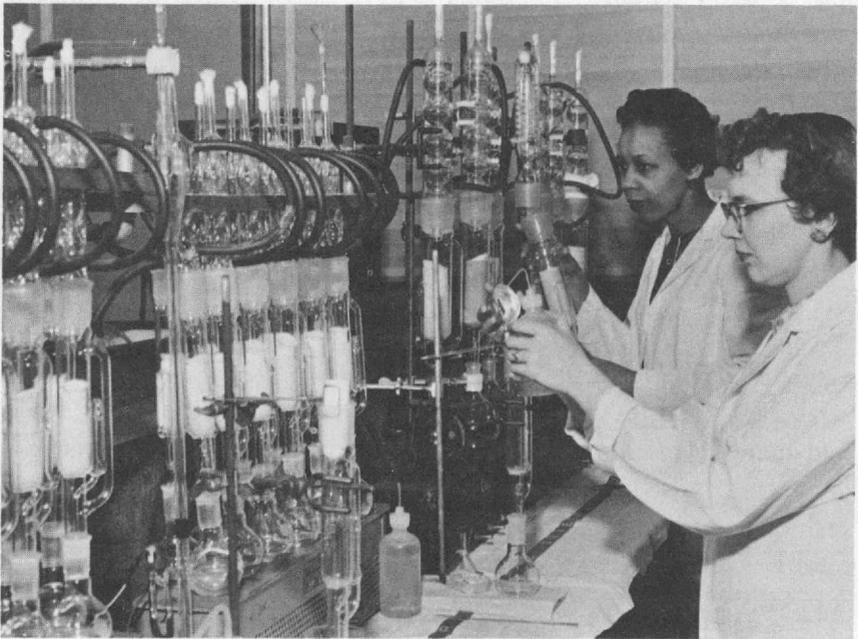
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\*This was the starting salary for graduates with a 1-year 30-semester-hour master's degree; the starting salary for those with a 2-year 60-semester-hour master's degree was \$8,479 a year.

or clothing may be employed by dress-pattern companies. Food manufacturers need home economists to prepare educational material on the nutritional value of a particular food product or on the methods of preparation. Home demonstration agents are employed by equipment manufacturers as well as by utility companies to teach customers the best and most efficient ways to use their equipment.

Other job fields for home economists include writing and editing homemaking sections of women's magazines and newspapers; planning and supervising shows for homemakers on radio or TV; engaging in research and testing of consumer products such as stoves, refrigerators, prepared food mixes, and dress fabrics; and acting as homemaking counselors and consultants for handicapped homemakers and their families.

Generally a bachelor's degree in home economics is the minimum requirement for professional work in the field. However, an advanced degree may be required in nutrition, college teaching, and certain kinds of research and supervisory work. Approximately 450



Nutritionists perform research to determine the amount of fat in raw foods.

colleges and universities in the country offer home economics training and grant a degree in home economics.

Girls planning a career in home economics will find that active membership in the College Chapters Section of the American Home Economics Association offers an excellent extracurricular supplement to their academic work.

In 1966 graduates with a bachelor's degree in home economics were hired by private industry at more than \$5,500 a year, according to a limited sample. Inexperienced home economists with a bachelor's degree entered the Federal service at an annual salary of \$5,331 in mid-1966; those with 1 year of qualifying experience or a 1-year master's degree entered at annual salaries ranging from \$6,451 to \$7,696; and those with 2 years of qualifying experience, 2 years of graduate study, or 2 years of an acceptable combination entered at annual salaries ranging from \$7,696 to \$9,221. In the cooperative extension service, annual salaries of county extension home economists averaged about \$7,900 in late 1966; those of State specialists averaged about \$10,350. Salaries of home economics teachers were on a par with other teachers' salaries.

## INSURANCE AGENT AND BROKER

Women have been exceedingly successful as insurance agents and brokers, although the percentage of women in these positions is rather small. The field is particularly appealing to some married women, because of the opportunities for part-time work and for visiting clients during evening hours and weekends. In 1967 there were approximately 400,000 insurance agents and brokers, 13 percent of whom were women.

Since insurance firms are in business to sell policies, the sales workers (agents and brokers) are the key group of employees. *Agents* sell insurance for a particular company or companies. *Brokers*, on the other hand, are independent operators who buy insurance for their clients from the company that best meets the individual client's needs. Although some brokers concentrate their business with a few companies, others distribute their sales among many companies. Aside from this distinction, agents and brokers do much the same kind of work.

Insurance agents and brokers are usually responsible for finding their own clients and for planning each sale so that the policy provides the special kind of protection needed by the policyholder. They must be able to describe in clear, nontechnical language the variety of policies available.

General duties, in addition to visiting clients and selling insurance, include preparing office reports, keeping records, developing lists of prospective clients, making appointments, and sending out information and promotional literature. Agents also assist in the preparation of application forms, collect initial premiums, and deliver policies to clients. Subsequently, agents provide services for clients, such as assisting with settlement of claims, conversion of policies, and similar matters.

A college education covering such subjects as accounting, economics, and business law is becoming increasingly important for those entering the insurance field. However, it is not a requirement of all firms. Most companies conduct on-the-job training and educational programs for their inexperienced agents, and often a new agent learns by working with an experienced agent for a brief period.

In order to sell insurance, salespersons must have a license for each State in which they operate. And in some States it is necessary to pass a written examination in each type of insurance sold. For this reason, most beginners prefer to specialize in only one type of insurance. A number of agents specialize in selling life insurance exclusively. Those doing business in more than one type of insurance usually combine life insurance and health insurance. Others sell various combinations of life, health, casualty, and property insurance.

A beginning insurance agent usually is guaranteed a minimum salary for the first year or two, while "building" a clientele. Thereafter, earnings are based on a percentage of the premiums paid by clients. Since renewal premiums on all policies sold by an agent are included in the calculations for a specified period, her earnings increase each year, even though she may sell only the same amount of new insurance.

## INTERIOR DESIGNER AND DECORATOR

An interior designer and decorator, as defined by the American Institute of Interior Designers, is a person qualified by training and experience to plan and supervise the design and execution of interiors and their furnishings, and to organize the various arts and crafts essential to their completion. In 1967 more than 15,000 people—about half of them women—were engaged full time in this growing profession. Formerly an interior decorator was concerned only with the furnishings of the interiors of homes or buildings after they were constructed. Today the designer must be skilled also in structural design, to integrate interiors with the total architecture and landscaping and to utilize new materials efficiently. A combination of artistic, technical, managerial, and merchandising skills is required.

The main specializations in the profession are commercial, residential, and institutional decorating. Employment opportunities are best in commercial decorating for such establishments as hotels, apartment house lobbies, restaurants, offices, stores, and even factories. Department and furniture stores also are employing an increasing number of decorators.

With the increasing complexity of the profession has come a greater emphasis on formal training, especially for those entering the field. A 4-year college course leading to a bachelor of fine arts degree, with a major in interior design and decoration, is usual. Courses in home economics, especially in fabrics, as well as training in business arithmetic also are valuable. The minimum educational requirement is completion of a 2- or 3-year course at a recognized art school or institute specializing in interior design. New graduates with art training usually serve a training period in the field, either with a decorating firm or a department store, or with an established designer.

Beginning salaries for art school or college graduates with formal training in the interior design field averaged from \$70 to \$90 a week in 1967. Some graduates of 4-year design schools received as high as \$100 a week, according to limited data available. Earnings of experienced decorators are quite varied, since few are paid a straight salary. Some are paid salary plus commissions, usually 5 to 10

percent of the value of their sales; others, who receive commissions only, may be paid as much as one-third of the value of their sales.

The American Institute of Interior Designers has student affiliate organizations that conduct forums and competitions, and offer scholarships to interested and qualified students.

## LAWYER

Despite the fact that law is a long-established profession, there are relatively few women in the field. However, women have demonstrated that they have the necessary abilities, and have achieved success in practically every phase of the legal field. Their experiences indicate that women with good legal preparation will find numerous employment opportunities and considerable financial reward.

About 7,000 women were working as lawyers in 1966. They represented about 3 percent of the total profession. More than half of the women lawyers were employed in salaried positions. Some were employed by government agencies; others worked as law clerks or as law associates for another lawyer or a law firm. A few were self-employed.

The practice of law involves counseling clients about their rights and liabilities under law and representing them in court if necessary; negotiating settlements out of court; representing clients before quasi-judicial bodies or administrative agencies of the government; acting as trustees, guardians, or executors; and preparing legal documents and papers. Government attorneys play an important role in the development and administration of Federal and State laws. Lawyers also may be elected or appointed as judges, hearing and deciding cases brought to court.

In order to practice law in a specific State, it is necessary to be a member of the bar of that State. For admission to the bar, prospective lawyers generally complete 3 years of college and 3 years of law school, as well as pass a State bar examination. There is, however, a wide range in the amount of general and legal education required by each of the 50 States and by some of the 137 law schools approved by the American Bar Association in 1967.

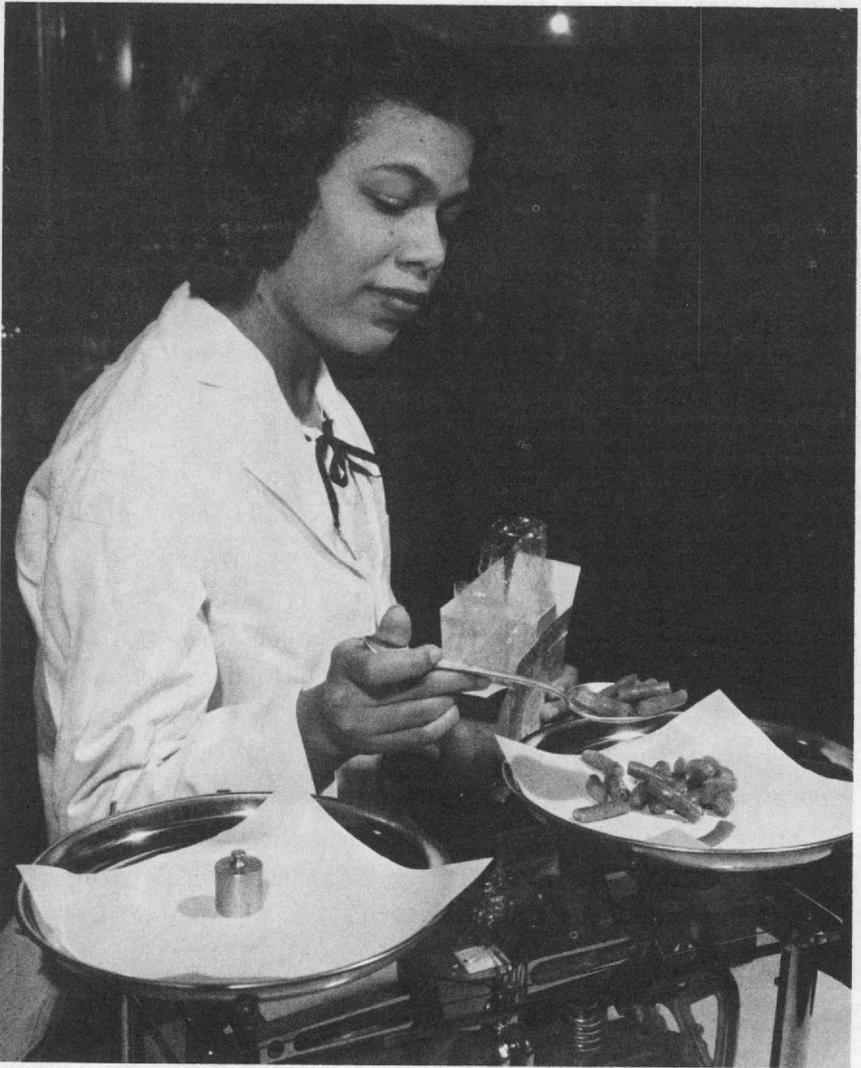
Entrance salaries for lawyers in the Federal service were \$6,451 or \$7,696 a year in mid-1966, depending upon previous work experience. Beginning lawyers in salaried positions with manufacturing and other business firms had an average annual salary of approximately \$7,668 in 1966. Those working for small law firms or doing legal aid work usually receive the lowest starting salaries.

## **LIBRARIAN**

For the young woman with intellectual curiosity, intelligence, interest in people, and love of books, a career as librarian offers excellent employment opportunities, for there is a nationwide shortage of trained librarians. About 80 percent of all librarians are women. Job openings exist in all types of libraries—public school, college, and university libraries; public libraries; and such special libraries as those in trade and service establishments, industrial organizations, museums, government agencies, and hospitals.

General duties of librarians may include selecting and purchasing books, magazines, manuscripts, maps, phonograph records, movie films and microforms; classifying and cataloging the items; publicizing library services; studying the reading interests of people served by the library; providing research and reference services; and preparing bibliographies and book reviews. In a small library, a librarian may perform a variety of tasks. In a large library, however, usually there is specialization in a particular phase of the work, such as reference work, children's services, cataloging, ordering, adult services, or the bookmobile.

To qualify for a professional library position, it is almost always necessary to have a master's degree. Usually this is earned after completing a course of study, generally 1 year, in an accredited library school. The entrance requirements of most library schools are graduation from an approved 4-year college or university with a good undergraduate record and a reading knowledge of a foreign language. Many library schools emphasize the importance of a liberal arts background with a major in either the social sciences, physical or biological sciences, fine arts, or comparative literature.



A chemist begins an experiment to determine the nutritional qualities of packaged string beans.

Some librarians have been very successful in utilizing an undergraduate specialty in combination with library training. For example, chemistry majors or minors with master's degrees in library science have found employment in the libraries of chemical companies.

Young women considering a career as librarian are wise to seek employment as library assistants or clerks during summer vacations or after school. Even though such work may be limited to clerical tasks, it provides a valuable opportunity to test one's real interest in and aptitude for the profession.

The average annual starting salary of inexperienced library school graduates was \$6,700 in 1966. Public libraries serving large cities and urban-centered county library systems paid new library school graduates between \$6,000 and \$6,300 in 1965. In the Federal service the entrance salary for librarians with a bachelor's degree, including 24 semester hours in library science, was \$5,331 in mid-1966; for those with a master's degree it was \$6,451.

## **MATHEMATICIAN**

Shortages of professional mathematicians are reported by many types of employers—especially universities, industrial manufacturers, insurance firms, and government agencies. The expectation of increasingly greater demand for mathematicians has expanded opportunities for both men and women who are qualified. About 5,700 women mathematicians were employed in the United States in early 1967.

Most mathematicians are engaged in research to increase the knowledge of basic mathematics or to solve practical problems. This research involves the utilization of formulas of higher mathematics for investigative, developmental, and research work in the physical, biological, or social sciences. This work, involving extensive computations, requires skill in the use of a variety of computing equipment, ranging from desk calculators to electronic computers.

Fundamental qualities needed by a mathematician are a logical mind, ability to work with numbers, imagination, interest in accuracy, and power to develop conclusions from arithmetical data.

A bachelor's degree in mathematics is considered adequate preparation for many positions in private industry and the Federal Government. However, the trend is toward requiring more graduate education—essential for those doing advanced research or college teaching.

A sound background in mathematics provides entry into many related jobs. The field of statistics offers increasing opportunities for persons trained in mathematics. The development of high-speed electronic computers has opened up many jobs for mathematicians and systems analysts. Insurance companies often hire those with mathematics training as actuaries to calculate premiums and to determine policy benefits. In addition to these job possibilities, persons with a good education in this field are in great demand as teachers of mathematics in secondary schools and colleges.

Starting salaries for mathematicians with bachelor's degrees were about \$7,300 a year in private industry in 1966, according to limited available information. For those with master's degrees, salaries were about \$1,700 a year higher. In mid-1966 inexperienced mathematicians with a bachelor's degree entered Federal service at \$6,387 or \$7,729 a year, depending upon their academic records.

## **MEDICAL TECHNOLOGIST**

With increasing reliance upon laboratory tests to reveal disease in early stages, the role of the medical technologist in providing accurate lifesaving information grows increasingly important. Medical technologists are laboratory workers who perform a wide variety of chemical, microscopic, and bacteriological tests to aid physicians in the detection and treatment of disease. These medical tests involve minute and accurate examination and analysis of body tissues, fluids, and byproducts.

Medical technologists who work in small laboratories often perform many different types of tests, whereas those in large laboratories usually specialize. Areas of specialization include microbiology, parasitology, biochemistry, blood banking, hematology, histology, virology, and the newer fields of cytology (analysis of castoff body cells for evidence of cancer) and nuclear medicine.

The largest number of medical technologists work in hospitals. Most of the others are employed by private laboratories, public health facilities, research institutions, and pharmaceutical companies.

Some hospitals and clinics hire only medical technologists with degrees. Many employers require prospective staff members to be registered or eligible for registration with the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists (ASCP). To qualify for examination by this board and for use of the professional designation "MT(ASCP)," a student must have completed at least 3 years of college, including 16 semester hours each of approved chemistry and biology courses and one course in mathematics, plus a minimum of 12 months in a school of medical technology accredited by the American Medical Association (AMA). Of the more than 46,000 technologists on the ASCP registry in August 1967, approximately 90 percent were women.

As of August 1967 there were nearly 800 schools of medical technology accredited by the AMA, 80 percent of which were affiliated with a college or university in a program preparing students to receive a bachelor's degree. Care should be taken in the selection of a school, to be sure it offers the training recognized by the AMA. Women with the most and best training will find a greater number of positions leading to advancement open to them. In late 1967 the National Committee for Careers in Medical Technology (NCCMT) reported that at least 16 universities offered master's degree programs in medical technology.

A survey issued by the NCCMT indicates that the median annual salary of a full-time MT(ASCP) was \$6,144 in 1966. Nearly 60 percent of the medical technologists earned more than \$6,000 a year, and more than 25 percent earned \$7,200 or more. The Federal Government employed newly graduated technologists at an annual salary of \$5,331 in mid-1966, with many experienced technologists earning between \$6,500 and \$9,000 a year.

## **MUSICIAN AND MUSIC TEACHER**

The broad field of music offers a variety of employment opportunities both in the performing arts and in teaching, with most job

opportunities for musically talented young people in teaching. A professional career in music calls for intensive training, great technical skill, and a thorough knowledge of music as well as talent. Proficiency in more than one instrument often is necessary.

A music teacher may give lessons at home, at a pupil's home, or in a studio. Trained teachers are also in great demand to lead choral groups, maintain instrumental groups, or conduct classes in music and music appreciation.

The positions of church organist, choir director, or vocalist offer excellent opportunities for women who are trained musicians. These positions often are filled on a part-time basis—an advantage to the musically trained homemaker unable to devote full time to a music career. Other career opportunities for music graduates include music librarian in radio and television stations, musical therapist in medical rehabilitation programs, and recreation leader in a variety of community agencies.

For teaching in elementary or secondary schools, a college degree in music or music education is satisfactory. For teaching the more theoretical aspects of music in a college or university, however, an advanced degree is required. Those who wish to obtain an advanced degree in church music may take courses in the music department of a number of theological seminaries. The American Guild of Organists awards a title of Associate or Fellow of the Guild of Organists (AAGO or FAGO) to those who pass their examination.

It is important to warn young people who aspire to be top musical performers, soloists, or members of "name" bands and orchestras that the road to success is extremely rough and the competition very keen. Except for very few, the chances of becoming a top performer are exceedingly small. However, those with outstanding talent, a deep love for music, intensive training, and a capacity for hard work may be able to attain their goal.

## NURSE

The girl who chooses a nursing career can expect to be doing satisfying and rewarding work as well as responding to an urgent need of society. Today the shortage of registered nurses continues to be acute despite the fact that the number of nurses rose from about

400,000 in 1950 to 621,000 in 1966, according to a report of the Interagency Conference on Nursing Statistics. The need for all types of registered nurses is expected to remain high. However, those with college training in education, administration, or one of the nursing specialties will find their services in particular demand. An estimated one-fourth of all nurses employed in 1966 worked on a part-time basis.

Professional nurses may be grouped into six categories, depending on the particular type of patient care and treatment they render. By far the largest number are *general duty nurses*, who usually work in hospitals. *Private duty nurses* are hired directly by patients or their families when constant attention is needed. They may work in a hospital or in the home of the patient. Physicians and dentists in private practice often hire *office nurses* to assist in the care of their patients.

Opportunities are growing for *public health nurses*, who are employed by public and private health agencies to care for patients in public health clinics or homes. In addition, some nurses work in schools. A smaller number, known as *occupational health (industrial) nurses*, provide nursing care to company employees in business and industry. *Nurse educators* teach student nurses as well as professional nurses enrolled in refresher and inservice courses. Although these are the main classifications of the profession, a few nurses perform research, and others write and edit nursing journals or textbooks. Some serve on the staffs of nursing organizations. For young women who are interested in nursing, volunteer service in hospitals during the summer months or after school provides an excellent opportunity to gain a better understanding of the nurse's role.

A bachelor of science degree with a major in nursing usually requires 4 academic years and two summer terms of study in a college that offers a nursing program. This is an integrated program combining nursing theory and practice with college-level courses in the basic sciences and the humanities. Upon graduation, a college-trained nurse may seek further study to develop a clinical specialty, such as pediatric or psychiatric nursing, or to prepare for public health nursing. On the other hand, she may prefer to change from patient-centered work to a position of greater executive responsi-

bility as a supervisor or administrator, a program planner, or a consultant.

Other education programs offering preparation for a professional nursing career are the 3-year diploma program conducted by a hospital school of nursing and the associate degree program covering 2 years of study in an approved junior college or community college. Possibilities for advancement are limited, however, without a bachelor's degree.

Under the Nurse Training Act of 1964, a needy student may obtain a loan, a portion of which does not have to be repaid if the student obtains full-time employment in nursing after graduation.

To become a registered nurse (R.N.), a nurse not only must complete a course in an accredited school or college but also must secure a license by passing the examination given by a State board of nursing.

How much a registered nurse earns depends on the level of her job, education, experience, and the pay scales in the community. Latest data available on salaries of registered nurses in hospitals from the mid-1965 survey made by the Bureau of Labor Statistics indicates a range of \$4,732 to \$6,162 a year for general duty nurses.

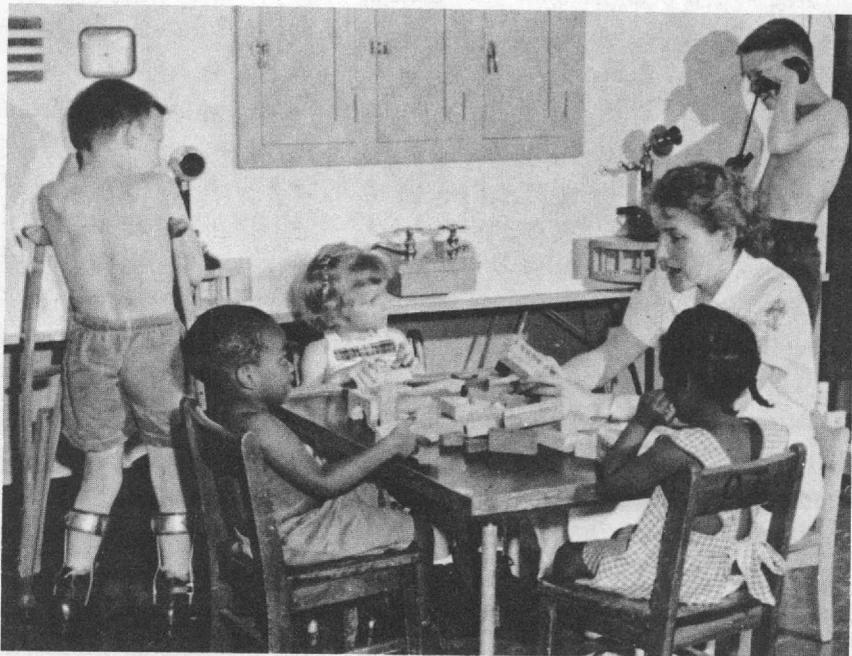
Public health nurses employed by local government agencies averaged \$5,811 a year in 1966, as indicated by a National League for Nursing study. In the Federal service the annual salaries of nurses ranged from \$5,331 to \$12,873 in mid-1966.

## **OCCUPATIONAL THERAPIST**

Occupational therapists use creative, craft, and recreational activities to help sick, injured, or disabled persons advance toward physical and mental recovery and often to acquire a job skill. It is the job of the occupational therapist, working in a team under the direction of a doctor, to select and direct those functional, recreational, educational, and vocational activities that best will meet the specific needs of each patient.

An arthritic patient has the occupational therapist to thank for helping her regain the use of her hands through creating an interest in weaving. An amputee is taught by the occupational therapist how

to use artificial limbs for the main activities of daily living. A mentally retarded child can learn to dress alone because of the efforts of the occupational therapist. A polio victim is employed successfully as a result of business skills acquired under the direction of the occupational therapist.



Young victims of cerebral palsy gain muscular coordination with the help of an occupational therapist.

These are just a few of the many types of patients that the occupational therapist assists. The work usually is varied, depending upon the patients' needs and desires and the rehabilitation goals set for them. The therapist works not only with patients but also with other medical personnel—doctors, nurses, physical therapists, and medical social workers.

Most occupational therapists are employed in hospitals, school clinics, nursing homes, sanitariums, homes for the aged, rehabilitation centers, camps for handicapped children, or State health departments. Home-visiting programs may be arranged for patients unable to attend clinics or workshops.

The demand for occupational therapists has been increasing so rapidly that a serious shortage exists. The pace has been rapid because of increased public interest in the rehabilitation of disabled persons and the demonstrated success of occupational therapy programs in restoring people to health.

Registered occupational therapists are those who have passed the national registration examination given by the American Occupational Therapy Association and thus have earned the right to use the initials O.T.R. This examination is open to students who have completed a 4-year undergraduate course in occupational therapy, as well as to graduates with a bachelor's degree in another field and some occupational therapy study, plus 9 to 10 months of supervised practice. Thirty-one colleges and universities offer full programs of study in occupational therapy. Five universities offer programs that lead to a master's degree.

High school students, college students, and other persons who have a definite interest in the field of occupational therapy may gain first-hand experience by serving as volunteer workers. If they have additional skills and talents in such fields as art, music, or sewing, they can help the occupational therapist to teach these skills to the patients.

In 1966 average annual salaries of staff occupational therapists ranged between \$5,500 and \$10,000, according to limited data available. Directors of services, coordinators, consultants, and others in top administrative positions earned annual salaries up to \$14,000. The beginning salary for occupational therapists employed by the Federal Government in mid-1966 was \$5,867 a year; for those with a master's degree it was \$6,451.

## **PERSONNEL WORKER**

Personnel work is a fast-growing field, especially for women. Women personnel workers are employed in all types of companies, but the majority are in department stores, utility companies, very large industrial corporations, and government agencies.

The operations of a personnel department include interviewing, hiring, transferring, psychological testing, and training. They also

cover such matters as wage determination, job classification, fringe benefits, employee counseling, personnel records, safety and health protection, and union-management relations.

As a college education is becoming increasingly important for entry into personnel work, many colleges and universities now offer coordinated programs in personnel administration. For some of the operations indicated, specific educational preparation may be required. For example, jobs involving psychological testing or employee counseling may require an undergraduate major in psychology, or even a graduate degree in that field.

Personal qualities important to success in personnel work include exceptional skill in working with all kinds of people, ability to communicate effectively, and capacity to understand another's point of view in order to take into consideration the interests of both employee and employer. A liking for detail and a high degree of persuasiveness also are helpful assets.

The International Association of Personnel Women reported in 1966 that beginning salaries in the field of personnel management ranged from \$4,000 to \$6,000 a year, and that it would be reasonable to progress from \$8,000 to \$10,000, with up to \$15,000 a possibility.

In mid-1966 inexperienced persons with a bachelor's degree were hired for professional positions in personnel work in the Federal service at \$5,331 or \$6,451 a year, depending upon their qualifications.

## **PHARMACIST**

A career in pharmacy offers numerous opportunities for qualified young women. More pharmacists will be in demand each year to meet the needs of our growing population—especially the needs of increased numbers of elderly people and of children—and to accommodate our rising standards of medical care. Continued expansion in the production of pharmaceuticals and in allied research is expected to provide more employment opportunities for pharmacists. Employment opportunities will increase with the growth and further

use of hospitals and extended-care facilities under medicare and with the demands for medication advisers and experts.

Most pharmacists practice in community pharmacies, where they have varied duties, including the buying and selling of related items requested by the public. In addition to expert knowledge of drugs, medicines, and sickroom supplies, the pharmacist in certain situations must have managerial ability. These various duties make pharmacy one of the most diversified of the health professions and help to explain why it appeals strongly to so many people.

According to a report of the American Pharmaceutical Association, women constitute about 8 percent of the total number of pharmacists. They make up 12 percent of the enrollment in colleges of pharmacy, and they are nearly 5 percent of all practicing pharmacists and 33 percent of hospital pharmacists. Many women pharmacists with children arrange for part-time work and later work on a full-time basis.

It takes at least 5 years of study beyond high school to graduate from a pharmacy college with a bachelor's degree. One or two years of additional study are required for a master's degree in hospital pharmacy or pharmacy administration. All of the 74 accredited pharmacy colleges admit women. Some accept qualified students directly from high school; others admit students only after they have completed a 2- or 3-year prepharmacy course in an accredited college or university.

Because pharmacists have such important responsibilities, all States have strict laws about licensing and practice. Since the laws vary, the pharmacy student should inquire into regulations applying in areas where she may wish to work. Besides graduating from an accredited school of pharmacy and passing a State board of pharmacy examination, the pharmacist must complete a specified period of practical experience known as internship or apprenticeship. In some States this requirement can be met fully during summer vacations, but other States require a portion or all of the practical experience to be obtained after graduation.

The woman who chooses to work in a community pharmacy starts with regular hours and a good salary. She can expect increases in compensation commensurate with ability and initiative. Managers or owners of pharmacies have incomes that compare very favorably with those of other professionals or businesswomen in the same community.

Salaries and opportunities for pharmacists in fields outside the community vary widely. Pharmacists with outstanding executive ability have the same opportunities and receive equivalent compensation as executives in other fields.

Reports from cities in various parts of the country in 1967 indicated salary rates that varied from \$6,600 to \$7,800 a year for beginning pharmacists employed in drug manufacturing firms. Annual salaries of experienced pharmacists working for retail pharmacies were generally between \$8,000 and \$11,500.

In the Armed Forces, pay and allowances for commissioned officers without dependents range from approximately \$5,250 to \$17,000 a year, and in the U.S. Public Health Service they range from approximately \$5,800 to \$16,000 a year. Newly graduated pharmacists entered other branches of the Federal service in mid-1966 at \$6,451 a year; pharmacists with a master's degree or a year of experience entered at \$7,696.

## PHYSICAL SCIENTIST

Qualified physical scientists are needed in much greater numbers to meet the expected demand for workers in research and development, analysis and testing, teaching, and technical writing (see *Writer and Editor* section). Unparalleled opportunities await today's college science major who, in addition to solid preparation in her specialization, acquires a knowledge of mathematics, a foreign language, English, and a social science. Although there are many employment opportunities for those with only a bachelor's degree, the greatest demand is for employees with advanced degrees.

Of the several branches of physical science, only chemistry and physics are considered here.

### *Chemist*

Most physical scientists are employed as chemists. In early 1967 more than 5 percent of the 122,000 professional chemists were women.

Chemists usually specialize in one of five main branches of chemistry; namely, organic, inorganic, physical, analytical, or biochemistry. The majority are employed by private industry, where they are engaged in research to discover new products, or in analyzing, inspecting, or testing products already developed. Some specialize in a particular industry or product.

Women are found in all branches of chemistry, with the largest number employed by the chemical industry, especially by manufacturers of drugs, medicines, and cosmetics. Significant numbers of women chemists are employed by hospitals and medical services, educational services, and government agencies.

Inexperienced chemistry graduates with a bachelor's degree had an average (median) starting salary of about \$7,500 a year in private industry in 1966, according to a survey conducted by the American Chemical Society. Beginning salaries in the Federal service for chemists with a bachelor's degree were \$6,387 or \$7,729 a year in mid-1966, depending upon their college records.

### *Physicist*

Young women who enjoy participating in and contributing to major technological advances of our modern world are welcome in this expanding field. So many of the new developments—electronic computers, long-distance telephone dialing, television by Telstar, nuclear reactors, supersonic jet planes, and lasers and masers—are based upon theories formulated by physicists. Many advances are possible only because of careful study and experimentation concerned with energy in all its forms, the interrelations of matter and energy, and the structure of matter.

The majority of physicists are engaged in research or college teaching. Research may be basic, or it may be applied. Some physicists add to basic knowledge through careful and systematic observations and experiments in identifying and measuring matter and energy and their interaction. Others integrate these findings into a theory or system of equations that describe their interrelationships. Many

physicists engaged in applied research use their ideas and theoretical knowledge to create final products. They plan and conduct experiments and often supervise the preparation and testing of laboratory models and, later, the design and testing of working models.

The demand for physicists by schools, colleges, universities, research laboratories, the Federal Government, and private industry continues to be high. There were approximately 44,000 physicists employed in 1967. Only about 3 percent were women. Far more are needed, not only in the new fields of physics but also in the older fields of optics and acoustics.

For a career in physics, a bachelor's degree with a major in physics is needed, as well as a strong foundation in mathematics. However, further professional advancement in the field generally requires graduate study as well. In 1966 earnings ranged from \$7,500 to \$8,000 a year for beginning physicists in private industry with a bachelor's degree; those with a master's degree earned from \$1,000 to \$2,000 more.

## PHYSICAL THERAPIST

Seeing a crippled child walk, an accident victim return to his job, or a disabled veteran return to active life are some of the rewards that a physical therapist receives to compensate for her patience and hard work. Such rewards probably account for the fact that from 1955-56 to 1964-65 the number of graduates from approved schools of physical therapy almost doubled. Nevertheless, there is still unmet demand for trained workers. It is estimated that many additional physical therapists will be needed each year through the 1970's. Meanwhile, the use of part-time workers is helping to alleviate the shortage.

The physical disorders treated by physical therapists include deformities, injuries, and disabilities resulting from such diverse causes as poliomyelitis, cerebral palsy, arthritis, and accidents. In carrying out treatments, therapists use physical exercise, mechanical apparatus, or applications of massage, heat, light, water, or electricity. In all their work, they follow the directions of doctors. They often perform muscle and nerve tests to obtain the information needed for developing the treatment program. Another aspect of their job is teaching patients how to use and care for braces, crutches,

and artificial limbs. In addition, they show patients and their families how to continue treatments at home. About 75 percent of all physical therapists are women.

Although qualified physical therapists may treat all types of patients, some specialize in working with children, veterans, amputees, paraplegics, or victims of poliomyelitis, cerebral palsy, arthritis, or muscular dystrophy.

Professional education in physical therapy is available at about 43 schools approved by the American Medical Association (AMA) and the American Physical Therapy Association (APTA). About half of these offer a 4-year program leading to a bachelor's degree with a major in physical therapy. The program includes supervised clinical experience in a hospital or treatment center. Some of the schools also offer a 12- to 24-month course in physical therapy to persons who already have a bachelor's degree that includes the required courses.

The curriculum of approved schools covers the sciences and skills basic to physical therapy, including anatomy, physiology, pathology, clinical medicine, and psychology, as well as techniques of electrotherapy, radiation therapy, hydrotherapy, massage, and exercise. At least 48 States and the District of Columbia require a license to practice physical therapy.

The APTA reports that in 1966 inexperienced physical therapists received average earnings of \$6,000. Salaries of experienced therapists ranged from \$7,500 to \$12,000. The annual entry salary in the Federal service in mid-1966 for inexperienced physical therapists was \$5,867 or \$6,451, depending upon their college records.

## **PHYSICIAN**

Medicine is a profession that often requires personal sacrifice. However, the opportunity to devote one's life to a career of such great social service has, for many, more than offset the long, rigorous academic preparation. Prejudices against women are decreasing with the great need for more doctors and the achievements of prominent women physicians. All medical colleges now admit women.

The number of women physicians more than doubled in the last two decades, rising by mid-1967 to about 20,000, or 7 percent of all professionally active physicians. A career in medicine does not preclude marriage and family, as indicated by the fact that many women doctors who are married have remained in active practice.

The majority of women physicians work on a salaried basis—employed mostly by hospitals; governmental agencies; private schools, colleges, and institutions; social agencies; research organizations; or industrial or other miscellaneous groups.

Many physicians working in hospitals and in research are specialists, as are more than half of those in private practice. Even many general practitioners engage in specialized work part of the time. For this reason, it is wise in planning for a medical career to include the years of extra training and study necessary to become certificated as a “diplomate,” that is, a specialist in one of the 35 fields recognized by the medical profession.

Minimum requirements for a license to be a general practitioner of medicine include 3 years of premedical undergraduate study, 4 years in an approved medical school (leading to the M.D. degree), a 1-year hospital internship, and passing a State licensing examination. To become a specialist, an additional 2 to 4 years of residency training are required, with the length of the period depending upon the area of specialization. Physicians are required to practice their specialty 2 years to meet certification standards of the specialty boards.

Although their undergraduate courses should include science electives, it is wise for premedical students to focus on acquiring a broad liberal arts education, especially in English and the social sciences. In the second or third year of college, students should plan to take the Medical College Admission Test. This is not an examination which one either “passes” or “fails,” but rather, a measure of potential for a medical career.

The successful practice of medicine requires more than long and disciplined academic preparation. Personal qualities are vitally important, since a doctor heals people, not diseases. A liking for people, an interest in science, good judgment, ability to make decisions in emergencies, physical stamina, and emotional stability are essential personal traits.

The Health Professions Educational Assistance Act of 1963 provides Federal funds for loans of up to \$2,000 a year to help needy students pursue full-time study leading to a degree of doctor of medicine.

New graduates serving as interns in 1966 had an average annual salary of \$3,578 in hospitals affiliated with medical schools and \$4,071 in other hospitals. Residents earned an average annual salary of \$3,818 in hospitals affiliated with medical schools and \$4,059 in nonaffiliated hospitals. Many hospitals also provided full or partial room, board, and other maintenance allowances to their interns and residents.

Graduates employed by the Federal Government in mid-1966 received \$11,111 a year upon completion of internship and \$13,201 upon completion of 1 year of residency.

The net income of physicians in private practice in 1966 averaged between \$20,000 and \$27,000 a year.

## **PROGRAMER AND SYSTEMS ANALYST**

The new field of electronic data processing (EDP) is an important field of employment for women as well as men. As recently as 1945 the first electronic computer was put into operation. The expansion of our economy and the growing complexity of government and business operations have made for rapid development in the use of computers.

Many thousands of new jobs for programers will become available each year during the 1965-75 decade. Women as well as men will find excellent opportunities in this field.

The various occupations connected with EDP still are in a fluid state, and the educational requirements and qualifications for employment have not yet been standardized.

*Programers* prepare step-by-step instructions for computers. Although popularly called "mechanical brains," computers cannot cerebrate without the assistance of programers. The programer researches and defines the problem to be solved, analyzes the data obtained in research, decides on the best method for processing by the



This programming manager holds a computer tape reel containing excerpts from the classics to be stored in the library of the future.

computer, plans the details of each step to be performed, translates these plans into machine operations through a coding system, and checks and corrects (debugs) the program to be sure it can operate in the computer.

In addition to programmers, *systems analysts*—sometimes called project planners or method analysts—also are employed by manufacturers of EDP equipment as well as by government agencies and private firms with EDP equipment. They are specialists who define

a complex "problem" and devise the method by which it is "solved" by the computer. They do the preliminary analysis and plan the best utilization of the electronic data equipment to achieve the desired solution. From this analysis the programmer prepares flow charts and computer instruction sheets for console operators to follow when the program is run on the computer.

A college degree in engineering, physics, or mathematics is the best preparation for becoming a systems analyst or a programmer working for an organization that uses its EDP equipment for scientific or engineering work or the solution of other complex research problems. Systems analysts usually are required to have several years' experience in programming and in the operation of computers. An increasing number of colleges and universities are offering courses in electronic data processing. Where the analysis is done by accountants and other subject matter experts, there is some evidence that 2 years of intensive training at the post-high school level may provide a sufficient background for beginners.

Personal abilities and characteristics are also of great importance in achieving success. Important factors include capacity for exacting analysis; ability to reason logically; qualities of patience, persistence, and extreme accuracy; capacity to follow instructions carefully; and ability to express oneself clearly both orally and in writing. Ingenuity and imagination are also desirable traits, since often new ways of arriving at solutions to problems must be worked out.

In mid-1966 salaries ranged from an average of about \$7,300 a year for beginners to between \$9,600 and \$11,000 for experienced programmers, according to a private survey. The minimum entrance salary for inexperienced programmers and systems analysts in the Federal service was \$5,331 a year in mid-1966.

## **REAL ESTATE AGENT AND BROKER**

Real estate selling offers an expanding field of employment for women. In fact, the number of women employed as agents or brokers more than doubled from 20,339 in 1950 to 46,108 in 1960.

It is estimated that selling real estate was the main occupation of about 75,000 women in early 1967. Women have become more ap-

preciated in this field because of their intimate knowledge and understanding of the needs of homeowners. They are particularly helpful from the point of view of housewives, who play a major role in home purchasing. Many women real estate agents are themselves housewives who find that part-time work can be combined successfully with home responsibilities, since prospective buyers often look at property in the evening or during the weekend.

A typical real estate office consists of a broker who manages the office and several salespersons called agents. In addition to advertising properties, developing new building projects, arranging for loans to finance purchases, and renting properties, a broker also sells property. It is the agents, however, who do most of the showing and selling of property. Each real estate office generally specializes in a particular kind of property—either houses, hotels, office buildings, farm properties, or land.

Persons considering a career in real estate selling should have sales ability, perseverance, integrity, maturity, and a sincere interest in people. They also must have a detailed knowledge of specific neighborhoods as well as of the physical, legal, and financial circumstances or regulations affecting properties. Although a college education is not required for entering the field, most real estate agents have some college training and many are college graduates.

Training opportunities are available for both beginners and experienced agents. More than 200 colleges and universities offer one or more courses in real estate. At many, students may earn a bachelor's degree with a major in real estate; some offer advanced degrees.

Local real estate boards, which are members of the National Association of Real Estate Boards, frequently offer courses in such subjects as real estate law and real estate financing. In addition to formal courses, beginners obtain much of their knowledge from actual job experience in a real estate office and from observing an experienced agent at work.

All States and the District of Columbia require prospective agents to pass a written examination covering pertinent State laws and real estate transactions. The licenses granted usually are renewable annually. Agents who move from one State to another must obtain a new license in the State where they plan to practice.

A more comprehensive examination is given to brokers than to agents. In more than one-fourth of the States, brokers must have a certain amount of experience as an agent before they can qualify for a broker's license; in some States, college credits in real estate courses may be substituted for experience.

## RECREATION WORKER

Recreation leadership is one of America's newest and fastest growing professions. With the shorter workweek, the increase in municipal and State recreation programs, and the growing use of therapeutic recreation in hospitals and institutions, the demand for well-trained recreation leaders is expected to continue to grow.

A recreation worker is concerned primarily with leisure-time activities such as parties, dances, games, sports, handicrafts, and dramatic or musical presentations. She may serve as a leader of such programs, working directly with the participants, or as an organizer and supervisor. This work frequently involves selecting, training, and supervising volunteers. The worker must be able also to demonstrate techniques and instruct the participants. Even when she works with a committee on the planning of a program, she is usually responsible for following through on the plans by securing necessary equipment and facilities, and preparing and distributing publicity.

Recreation workers are employed by a wide range of organizations—municipal, county, and district recreation and park departments; State and Federal Government agencies; camps; institutions such as schools, hospitals, and children's homes—as well as industrial and business organizations with an employe recreation program. A large number of professionally trained recreation workers are employed by settlement houses and community centers, as well as by youth-serving agencies such as the Girl Scouts, Camp Fire Girls, and YWCA. However, some of these agencies prefer graduates with a degree in social group work rather than in recreation.

More than one-third of all recreation workers are women. Opportunities in this field are expected to increase rapidly, at least through the mid-1970's. In recent years the number of persons graduating with a major in the field of recreation has fallen far short of the

demand, and this pattern is expected to continue. Therefore, many new recreation workers will come from the related academic fields of physical education and health education. Persons having less than full professional training also will find employment opportunities.

A college degree with a major in recreation or physical education is considered desirable for most recreation leadership positions today, although fewer than half of the recreation workers currently employed have this educational background.

There are now more than 100 colleges and universities conducting major recreation and park curriculums, according to a study by the National Recreation and Parks Association (NRPA). Of these, about half grant master's and doctor's degrees. The college recreation curriculum combines the opportunity to learn specific recreation skills—music, drama, social recreation, sports, and games—with the study of such theoretical subjects as principles and methods of leadership and recreation administration.

Since the major role of a recreation leader is to help people have a good time and grow in the process, the personal qualities of a recreation worker are highly important. Those who enjoy working with people; have emotional maturity, initiative, imagination, and enthusiasm; and can organize, plan, and follow through on a program have the best chance for success in this work. To test whether these characteristics are present, it is helpful to participate in extracurricular activities—drama, music, sports, or school publications—or to hold a paid or volunteer job at a playground, camp, recreation center, or community agency.

Beginning recreation leaders earned between \$6,500 and \$7,000 in early 1967, according to the NRPA; salaries of recreation supervisors ranged from \$7,500 to \$10,000. In mid-1966 the annual starting salary for most inexperienced recreation workers in the Federal service was \$5,331; those with a superior academic record or with specialized training received an annual salary of \$6,451.

## **RELIGIOUS WORKER**

Young people who decide to carry on their lifework in the field of religion usually are impelled by considerations that are not the same as those which influence the selection of most other careers.

Their decisions usually stem from a strong commitment to a religious faith and a deep desire to serve the spiritual needs of others. Such considerations as geographic location, earnings, and promotions can be assumed to be secondary.

The opportunities for rewarding work in church and religious institutions cover several positions of interest to college women. According to the 1960 census, there were almost 5,000 women members of the clergy, and more than 35,000 other women were religious education directors, youth workers, Bible teachers, deaconesses, home and foreign missionaries, nuns, or Christian Science practitioners. The number of women in the nonclergy group had increased 21 percent since 1950.

In the academic year 1964-65, women earned 1,031 undergraduate degrees and 118 graduate degrees in religious education. This sizable number of women with college education reflects the increased effort of various religious organizations to set higher standards of training for those who serve their congregations. Many churches now require the professional workers in their religious education department to have a bachelor's degree including liberal arts, plus at least 1 year of graduate work in religious education, theology, or philosophy of religion at a theological seminary.

The challenging and demanding task of the religious education director is to provide central leadership to project, coordinate, and supervise a balanced program of religious education for all age groups. She recruits and trains Sunday school teachers, plans the curriculum with them, and is a resource for new teaching materials and methods. She may function also as director of program activities for the subteen and youth fellowships, the young adult group, and various women's organizations of the church, as well as other adult groups. Her duties usually include setting up leadership training conferences, leading worship services, assisting committee chairmen in planning meetings, and visiting church families. In addition, she participates in denominational and interdenominational activities in the area.

Those considering a career in religious work would be wise to discuss their interest with a member of the clergy or other religious leader. Such persons can give a confidential and objective evaluation of the personal qualifications needed and of probable chances

for success. Active participation in religious fellowship groups while in high school or college and attendance at church-related conferences and meetings give a clue to the kinds of activities and dedication that are usual in this field.

## RETAIL STORE BUYER

Those who enjoy the excitement of trade and competition should consider the opportunities of a buyer in a department or other retail store. The almost 55,000 women employed as buyers and depart-



A silver buyer for a retail store examines new merchandise.

ment managers in 1960 constituted about 25 percent of all persons in this category. The number may be reduced in the future, however, if more use is made of buying committees in mass retailing enterprises and of computers in compiling data needed for decisionmaking.

Within the budget set by a merchandise manager, a buyer has responsibility for determining what, where, and when to buy for a specific department. This often involves traveling some distance to the "market." It is also her duty to train the salesclerks concerning the assets of new merchandise and to supervise its display and advertising. Each day she analyzes sales and decides on reorders and markdowns. Increasingly, she is responsible also for her department in suburban or branch stores.

To be successful in such a multifaceted job, a buyer must be a good judge of customer likes and dislikes and able to sense style trends. She also must know reliable sources of supply and be a good judge of merchandise quality.

A college education is extremely helpful but not essential to becoming a buyer. Courses in merchandising and business management as well as in textiles and clothing are especially useful. Three to six years of experience as a salesperson, department manager, and assistant buyer usually are required to become a buyer. Executive trainees usually take less time, depending upon the complexity of and their responsibilities in their departments. It should be noted that the work hours of buyers are often long and the 6-day week is usual in some stores. However, the financial reward and challenge of business responsibility are compensating features for those who enjoy this type of work.

## SECRETARY

Many cities report a chronic shortage of first-class secretaries. A college-trained woman who has mastered typing and shorthand can become a secretary *par excellence*, especially if she majored in English.

The college-trained secretary may perform such usual duties as taking dictation and typing; she often drafts correspondence, performs some editing or research work, makes arrangements for trips,

or organizes conferences and meetings. Top secretaries may advance to such responsible and better paying positions as executive secretary or administrative assistant to a high-ranking executive.

For college women, a secretarial job has been regarded traditionally as a springboard to many kinds of professional and executive jobs. This is frequently true, for example, in magazine publishing, banking, editorial work, and personnel work. However, in many other fields the value of secretarial experience as an entering wedge to professional work is less significant today than it used to be.

Some young women enjoy combining their secretarial skills with specialized training in a particular field. In this group are medical secretaries, who take dictation involving medical terminology and sometimes perform routine laboratory and other semitechnical medical duties along with their regular secretarial assignment. Legal secretaries must have knowledge of many legal terms when preparing such papers as summonses, complaints, and subpoenas. Engineering and scientific secretaries must be familiar with scientific terms. Such specialized secretaries as these have many excellent opportunities for employment and usually earn higher salaries than regular secretaries.

## **SOCIAL SCIENTIST**

Women are attracted to the social science field, with its special concern for human society and activities, ranging from man's first social development to his latest electoral decisions. The field is so broad that most social scientists specialize in just one branch—economics, political science, history, sociology, or anthropology. It is estimated that in 1966 there were more than 50,000 social scientists. About 10 percent were women.

Professional employment in the social sciences has been increasing steadily and is expected to grow even more rapidly, mainly because of the greater demand for college teachers and moderate increases in government employment—local, State, and Federal. In most of the social sciences, graduate work is necessary for advancement beyond the entry positions; for some, it is required even for entry.

The Vocational Education Act of 1963, the Economic Opportunity Act of 1964, and the Appalachian Regional Development Act of

1965 are recent programs that will increase the demand for social science personnel.

### *Economist*

Economists are the largest single group of professional workers in the social sciences. In 1966 about 40 percent of all economists were employed in industry, while the remainder were about equally divided between colleges and universities and some were in government service. A few were self-employed.

Economists conduct research, prepare reports, make studies, and formulate plans designed to aid in the solution of economic problems arising from the production and distribution of goods and services. They compile, organize, and interpret economic and statistical data, as well as devise methods for the collection and processing of such data.

Women were 14 percent of all economists in 1966. The average annual salary for women economists was \$10,300.

The beginning salary in the Federal service in mid-1966 for economists with a bachelor's degree was \$5,331 a year; it was \$6,451 for graduates with superior academic records as well as those with master's degrees.

### *Sociologist*

Professional sociologists may specialize in any of the numerous branches of sociology: social organization, social psychology, rural sociology, intergroup relations, family problems, urban and regional development, penology—to mention some of the major ones. At least a master's degree usually is required for the task of investigating in depth the social relationships that have arisen out of group life in society. A sociologist with only a bachelor's degree generally is not considered qualified for professional employment in this field.

Sociologists are employed by colleges and universities, government agencies, and research bureaus connected with universities, welfare agencies, other nonprofit organizations, and large companies.

The beginning salary in Federal service in mid-1966 for sociologists with a bachelor's degree was \$5,331 a year; it was \$6,451 for inexperienced sociologists with superior academic records as well as those with a master's degree.

## SOCIAL WORKER

Social work offers an opportunity to serve others in a very direct way. There were more than 150,000 social workers in early 1967. About 60 percent were women. The majority of all social workers are *caseworkers*, who help people solve the individual or family difficulties that interfere with healthful and useful living. Others are *social group workers*, who conduct leisure-time activities and informal education programs to help youth in the process of growing up and help people of all ages to develop in their social relations. A third group are *community organization workers*, who plan, develop, and coordinate health and social welfare programs and develop volunteer leaders. In each of these areas of social work practice there are jobs in administration and research.

Social workers of all types are employed both by government (local, State, and Federal) agencies and by voluntary (privately operated) agencies. A small number of social workers are serving overseas as consultants, as teachers who train local leaders, and as technicians.

Preparation for a career in social work is virtually the same for the three types of work. A good preparation is a broad liberal arts education with emphasis on such subjects as economics, sociology, psychology, political science, anthropology, and history. Undergraduate courses that provide an orientation to social work are especially valuable.

Full professional status requires the completion of a 2-year program of graduate study in one of the 66 accredited schools of social work and a master's degree. Over the long run, the demand for social workers with graduate education is expected to exceed the supply. More workers will be needed to maintain existing social welfare programs for our increasing population, especially for children and youth, and to develop new services dealing with emerging problems. Such youth-serving organizations as the Camp Fire Girls, Girl Scouts, and YWCA report marked shortages of trained workers and stress the rising number of job opportunities in their agencies in the coming years.

Although young women with a bachelor's degree, usually in the social sciences, may be hired by social work agencies, opportunities for advancement are limited without graduate study. Some agencies

assist staff aides to complete their graduate training through a work-study or scholarship plan. Many scholarships and fellowships are available for graduate education.

Personal qualities essential for social workers include a basic interest in people, ability to work harmoniously with others, emotional maturity, objectivity, capacity for realistic planning, and ability to help others develop their own capabilities.

Those who are thinking about a career in social work should obtain as much experience as possible during college so that they can test their interest in and capacity for professional social work. Volunteer, part-time, or summer workers frequently are needed in camps, settlement houses, community centers, and social welfare agencies. In addition, workshops and seminars for undergraduates contemplating careers in professional social work are held in some cities every summer.

The average (median) starting salary paid social caseworkers by various State agencies was approximately \$5,100 a year in early 1967. Casework supervisors had average annual salaries ranging from \$6,700 for those with little experience to \$8,600 for those with considerable experience.

In the Federal Government in mid-1966, graduates of accredited schools of social work received starting salaries of \$6,451 or \$7,696 a year, depending upon qualifications.

## STATISTICIAN

Statisticians use scientific methods to collect, analyze, and interpret numerical data. Their many calculations examine, for example, the probability that consumers will accept a specific new product; characteristics of young people seeking jobs for the first time; effectiveness of a polio vaccine; and thousands of other determinations vital to individual well-being and sound government and business policies. With the increased demand for factual data in decision-making, the number and importance of statisticians in government, education, business, and industry have grown steadily.

The employment outlook is good for statisticians through the mid-1970's. Well-qualified women statisticians should find favorable opportunities in all phases of statistical work. Opportunities for

advancement for women statisticians probably will be best in teaching and in research positions in the social sciences.

The personal qualities important for a statistician are a logical mind, a liking for numbers, interest in mathematical accuracy, ability to draw general conclusions from a mass of data, and imagination.

The minimum educational requirement for many of the beginning positions in this field is a major in statistics or mathematics. Students interested in obtaining jobs as applied statisticians usually take courses in the field in which they intend to work, such as economics, business administration, psychology, or sociology. Basically essential are courses in algebra, plane trigonometry, analytical geometry, differential and integral calculus—plus at least one course in statistical methods and techniques.

Approximately 7,000 women were employed as statisticians in 1967—almost one-third of the total. The average annual salary for women statisticians was \$10,500.

In mid-1966 beginning survey statisticians with a bachelor's degree received \$5,531 a year and mathematical statisticians, \$6,387 a year in the Federal service. Those with a master's degree started at approximately \$1,500 more a year.

## TEACHER

More women are engaged in teaching in various types of schools—colleges and nursery, kindergarten, elementary, secondary, and adult—than are employed in any other professional occupation. The young woman contemplating a career in teaching will want to consider the wide range of specialties in the broad field of education. She may teach several subjects as an elementary school teacher, or she may concentrate on just one or two. She may teach in one school or may divide her time among several schools, as many music teachers do. She may teach one age group—only 6-year-olds—or she may conduct classes for a variety of persons, adults as well as children. Although most teachers work with normal persons, others teach only physically handicapped, mentally and emotionally disturbed, or gifted children.

All public school teachers and some private school teachers must be certified. Certification requirements, which vary by State, generally include graduation from college, completion of certain pro-

fessional courses, and practice teaching. A bachelor's degree is a minimum requirement for certification in almost all States. On the other hand, some States issue a certificate for secondary school teaching only after the candidate has completed a year of graduate study.

The undergraduate student who hopes to become a college teacher should major in a subject-matter field such as English, history, or music, and then plan to do graduate work after she receives her bachelor's degree. Advancement on a college faculty usually requires a doctoral degree and a number of years of teaching experience. Many colleges and universities offer a limited number of teaching fellowships and part-time assistantships for graduate students.

Over the 10-year period 1965-75, continued population growth and increased high school and college attendance are expected to produce a rise in high school enrollments and an impressive rate of increase in college enrollments. A sizable increase in the number of children enrolled in elementary school is expected. Total enrollments in all schools and colleges combined, according to U.S. Office of Education estimates, may increase to more than 60 million by 1975.

The added opportunities for teachers in the field of adult education result in part from the expansion of adult classes in public schools and in part from the growth of community and youth-serving organizations that sponsor adult training programs. Usually a college



Teaching adults is an expanding field of employment for women.

degree and sometimes a graduate degree are required for adult education teachers.

The demand for well-qualified teachers is expected to remain strong in most teaching fields. The Bureau of Labor Statistics estimates that, to cover increased enrollments and to replace those who leave teaching, the Nation's teaching staff will need to be almost a third, or about 650,000, larger by 1975.

Public school teachers averaged \$6,609 a year in elementary schools and \$7,095 in secondary schools in 1966-67, according to estimates by the National Education Association. For the academic year 1966-67, the American Association of University Professors reported an average annual salary of \$10,387 for full-time instructional staff in colleges and universities.

In the Federal service in mid-1966, starting salaries for teachers with a bachelor's degree in education were \$5,331 or \$6,451 a year, depending upon qualifications. For those with a master's degree the salaries were \$6,451 or \$7,696, depending upon their academic records.

## WRITER AND EDITOR

The vital importance of communication in our modern society has raised markedly the status and need for writers, editors, and reporters. The career outlook in this professional field is exceptionally good for the trained and talented, whether they are men or women. In 1960 almost 38,000 women were professional editors and reporters; an additional 7,000 women were listed as authors.

At one time most writers, editors, and reporters were employed by newspaper publishers. Now larger numbers are employed by industrial publications, of which there are approximately 10,000 in the United States; agricultural and scientific journals; trade association and labor publications; as well as by religious publishing houses, book and magazine publishers, broadcasters, advertisers, public relations firms, and government agencies. Women are approximately 5 percent of editorial staffs. There were 12,000 women newspaper reporters in early 1967.

Technical writers prepare manuals, bulletins, and other literature in which they present scientific and technical information in a clear, logical manner that can be understood by the general public. These

specialists are employed by a wide variety of firms, particularly in the electronics and aerospace industries, and by research and development firms as well as by the Federal Government.

A college major in journalism usually is required for beginning writers hired by newspapers, news magazines, trade publications, and broadcasters. More than 175 colleges and universities now offer professional training leading to a degree in journalism. A number of schools award a master's degree in journalism, and a few award a doctorate.

For a post on the editorial staff of a publisher of books or popular magazines or for freelance creative writing, a major in English may be preferable.

Courses in such subjects as sociology, political science, economics, history, and psychology are valuable in most writing assignments. For work on a woman's magazine or with an advertising firm, a major in journalism should be supplemented with appropriate courses in home economics, including both fashions and foods. Various courses in economics are needed by an editor of a trade association or labor publication. Technical writers usually have a combination of courses in writing and scientific or technical subjects.

Extracurricular activities such as working on a school paper, yearbook, or literary magazine offer good opportunity for a student to develop writing ability. Cub reporting on a hometown or suburban newspaper during the summer is another way to obtain experience. Opportunities are increasing for college students to learn the rudiments of reporting through summer internships with newspapers. These internships—more than 1,000 in 1964—usually lead to regular employment upon graduation.

Certain personal characteristics are strategic in achieving success as a writer. Writing ability is, of course, fundamental. Equally important is the ability to discipline oneself to meet deadlines. Other necessities are a well-developed curiosity, a "nose for news," persistence, initiative, resourcefulness, and an accurate memory.

Earnings of writers and editors vary widely. Minimum salaries for reporters without previous experience, who were members of the American Newspaper Guild, ranged from \$80 to \$120 a week in early 1967.

In 1967 inexperienced technical writers with a bachelor's degree were hired in private industry at starting annual salaries ranging from \$5,000 to \$7,000. In the Federal service in mid-1966, inexperienced technical writers started at \$5,331 or \$6,451 a year.

## PRACTICAL CONSIDERATIONS

### THE JOB MARKET

It is estimated that by 1980 the number of workers 14 years of age and over in the United States will increase to more than 100 million. What is the place of women in this picture? During 1966 there were on the average nearly 28 million women in the labor force throughout our Nation, exceeding—by 7.4 million—the record number of women workers during World War II. Their number continues to grow, and it is anticipated that by 1980 there will be more than 36 million women in the labor force. In fact, the increase is expected to amount to 31 percent for women compared with 24 percent for men.

There are many reasons for this sharp increase in the number of women, especially married women, who are seeking and finding employment. Economic necessity, including the higher standard of living desired by most people and the increasing cost of educating children, is the principal reason why women seek employment. Laborsaving equipment in the home and the vast array of prepared foods available make it possible for many women to combine home-making with paid employment. And last but not least, many women find paid employment creative and satisfying.

### WORK ACTIVITY

When various career possibilities are being considered, it is important to think about the variety of related opportunities they offer and the possible avenues of advancement. Some fields may be somewhat limited, while others provide many opportunities for teaching, research work, or administrative work. For example, those who study home economics with a specialty in clothing may have a choice of

teaching sewing to a group of teenage girls, researching fabric durability, writing or editing women's magazines, being a fashion consultant to a large department store, or doing administrative work in a dress-pattern company. Some of these positions are attainable upon graduation, whereas others require more training and experience in the field.

### *Teaching*

This activity is common to many disciplines, not just the specific field of education. Some nurses teach nursing; some economists teach students of economics; and so on. As the number of evening adult education programs increases, many practicing professionals—accountants, for example—are teaching night courses.

### *Research work*

Research jobs are available in almost every specialization for college women who are properly trained in their profession and in research techniques. This type of work requires a high degree of accuracy, patience, and objectivity. Some executives consider women excellent research workers, as evidenced by the significant number of women who have reached the top rank on research staffs.

Women are performing scientific research in the laboratories of big food and chemical companies and statistical and economic research in nearly all large business organizations. They also fill many research positions with magazines, advertising firms, national political organizations, and large foundations. The Federal Government employs many research workers, as do colleges and universities.

A girl who plans to become a research worker will need a sound background in methodology and statistics, combined with specialization in a subject-matter field such as one of the social or natural sciences or engineering.

### *Administrative work*

Opportunities for women to reach executive positions are increasing. More than a million women were employed as officials and managers in administrative posts in 1966. At the time of the 1960 census, the largest group of women executives were employed in retail trade, followed by finance, insurance, and real estate. Women

also were found in appreciable numbers as administrators in public administration, manufacturing, education, medical and health services, and social welfare agencies. The proportion of women in executive posts usually is much smaller than the proportion of women in the occupation as a whole. The greatest opportunities for women to reach top-level positions are still in women's colleges, women's organizations, and community and youth-serving organizations.

The expanding activities of such organizations as the Girl Scouts, Camp Fire Girls, and YWCA emphasize the growing opportunities for women administrators in community and youth-serving organizations. Many of their executive positions are for "administrative generalists," whose varied responsibilities may include formulating policies and procedures, employing and supervising staff, planning and developing programs and supporting services, directing financial and business operations, maintaining effective public and community relations, and working with volunteer boards and committees. In addition, there are numerous "administrative specialists," who concentrate on a particular area of work, such as personnel, public relations, finance and fundraising, adult education, or program development.

## **EARNINGS AND FRINGE BENEFITS**

Although it is only one of several factors to be considered in choosing an occupation, the subject of earnings is of much interest. For detailed earnings information, it is desirable to consult advisers, experienced persons in the profession, and available literature not only on starting pay but also on salaries of experienced workers and prospects for advancement.

In general, of course, a well-qualified woman with a sound educational background will command a higher entrance salary and will advance more rapidly than one with less adequate preparation.

The median wage or salary income of women employed full time the year round in professional occupations in 1965 was \$5,574. The highest income generally is received by women employed as doctors, lawyers, and scientists—occupational groups requiring above-average educational preparation. Lower salaries frequently are found

in the professions with large numbers of women; for example, nurses, dietitians, and librarians.

About 6 percent of all women professional workers, excluding teachers, were employed by Federal, State, and local governments in 1960. Nearly half of the women in government work were in the Federal service. Salaries of Federal Government workers are determined by the Classification Act of 1949, as amended, and are related to job grades, which are determined by the difficulty, complexity, and responsibility of the work. In mid-1966, most new college graduates without previous experience started at \$5,331 or \$6,451 a year, depending upon their qualifications. Somewhat higher starting rates are paid for entry positions in engineering, mathematics, and the physical sciences, however, to make Federal salaries conform more closely to those paid in private industry.

Other considerations that may influence the choice of employment with one establishment rather than another are retirement programs, job security provisions, vacations, sick leave, and any special benefits—health and insurance plans, profit-sharing plans, and so forth—which the company or organization offers.

## SOURCES OF EMPLOYMENT

Most professional workers are employed by one of four major groups of employers; namely, educational institutions, government agencies (Federal, State, and local), private industry, and nonprofit organizations. The remainder are self-employed. Many jobs, of course, can be performed for any type of employer. For example, librarians are needed to staff school libraries (educational institutions), public libraries (government agencies), corporation libraries (private industry), and foundation libraries (nonprofit organizations).

### *Educational institutions*

Although most college graduates employed by educational institutions are teachers, numerous other professional workers also are needed by educational institutions. These include counselors, librarians, dietitians, nurses, doctors, social workers, psychologists, personnel workers, and recreation workers.

### *Government\**

Employment in government jobs—local, State, and Federal—offers stimulating and challenging careers to qualified young women.

Almost 55,000 women professional workers, excluding teachers, were employed by *State and local governments* in 1960. Almost 60 percent were social welfare workers. Personnel and labor relations workers, accountants, nurses, recreation and group workers, social scientists, and lawyers and judges were the other major categories of women professional workers. Since qualifications for employment with State and local governments vary widely, information should be obtained from the specific agency of interest.

Opportunities for employment in the *Federal Government* include civil service positions at home and abroad, the Foreign Service, the Peace Corps, and the Armed Forces.

Every year hundreds of college seniors and recent college graduates qualify for civil service positions in agencies of the Federal Government. The Federal Service Entrance Examination (FSEE) is given for a wide variety of professional positions at the entrance level. Completion of a 4-year college course leading to a bachelor's degree, or equivalent experience, is required. College juniors and seniors also may apply for the examination. When an undergraduate successfully completes the examination, she may accept a job but may not report for duty until she has completed the degree requirements. Application blanks for Federal examinations may be obtained from the U.S. Civil Service Commission, Washington, D.C. 20415.

Those who pass the FSEE may qualify for positions throughout the country in such fields as general administration, economics, social sciences, social security administration, communications, electronic data processing, personnel, statistics, and others. In such fields as library science, mathematics, engineering, and in the natural sciences, a special examination is given in lieu of the FSEE examination.

College graduates interested in special training for positions of high responsibility in the Federal service are admitted to the Management Intern Program if they pass three tests: the general FSEE,

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\*Excludes the teaching profession.

a special written test on either administrative problems or public affairs, and an oral examination.

About 45,000 women were performing professional work in the Federal service in the United States during 1964. They were working in almost every type of professional activity. In all Federal civil service positions, women receive the same pay as men for the same level of work. In 1964 about 10,517 women held positions in the Federal service that paid \$10,000 or more a year.

A number of U.S. citizens hold Federal civil service jobs abroad in numerous fields. They are doctors, nurses, teachers, librarians, technical experts, clerks, stenographers, social workers, and economists. The requirements for overseas work, in addition to the usual specialized requirements, include a rigid physical examination, security clearance, and an assurance on the part of the employee that she will remain in the post for a definite period of service.

Positions in the *Foreign Service* of the U.S. Department of State are not covered by the regular civil service system. Special examinations are given annually. The tasks vary widely, depending upon the particular assignment. In general, the work of Foreign Service officers falls into two broad categories: diplomatic and consular. The diplomatic staff is concerned with negotiating agreements, reporting political developments, and representing the United States. They also may be cultural, information, or labor attachés. The most important consular functions are visa work concerned with passports and permits, and protecting the interests of Americans abroad.

Foreign Service officers are supported by the Foreign Service staff. Since the staff is larger and the majority are clerical workers, this service offers additional opportunities for young women to serve their country overseas.

Many young people such as teachers, agricultural and community development workers, nurses and medical aides, public health workers, home economists, engineers, physical education instructors, and recreation leaders have obtained challenging overseas assignments in the *Peace Corps*. Peace Corps volunteers have been assigned to serve in more than 52 nations of Latin America, Africa, the Near East, East Asia, and the Pacific region.

Peace Corps volunteers receive allowances for food, clothing, housing, and miscellaneous expenses. In addition, transportation and

medical expenses are provided. Upon completion of 2 years' service, a termination payment of \$1,800 is given to each volunteer with a satisfactory service record. And the volunteer has the option of extending her service up to 2 years. Although the Peace Corps is not a lifetime career, it offers unusually good preparation for subsequent work at home or abroad.

Women college graduates who are interested in a career in the *Armed Forces* may apply for a commission in one of four branches of the service. The highest rank that can be held by a woman is that of captain in the Navy or colonel in the Army, Air Force, or Marines.

An officer is expected to handle a great variety of tasks commensurate with her rank, experience, and age. An educational background that includes a variety of subjects is, therefore, essential. A college woman who receives a commission may be placed in any one of a number of fields, such as administration, communications, public relations, intelligence, logistics, finance, and engineering, or she may be moved from one field to another.

College graduates with professional or technical training in a medical specialty are especially needed. Nurses, dietitians, and occupational and physical therapists who receive staff commissions in military hospitals of the Army, Navy, or Air Force or in the U.S. Public Health Service begin with the rank of second lieutenant or ensign.

The welfare of our country requires women's participation in political affairs as voters and volunteer workers. It is equally important for well-qualified women to serve in elective and appointive offices, where local, State, national, and international policies are formulated. *Public office* often is achieved after a person has become known in a certain field, such as law, newspaper writing, business management, political science, and teaching. Sometimes such specialized background leads to an appointive position on the local, State, or Federal level. Service in a local or State position is excellent preparation for work on the national level, and experience gained in appointive posts can be a valuable asset to a person seeking elective office.

A college woman whose goal is in the political field will want to stress courses such as public administration, government, history,

economics, and finance. English and public speaking, as well as training in law, provide an excellent background for a career in politics.

### *Private industry*

Increasing numbers of college-trained women are being employed by private industry for a wide variety of jobs. Salaries, fringe benefits, entry jobs, and advancement opportunities vary widely among industries, geographic areas, and individual companies. Specific information on these subjects should be requested from individual firms.

Many firms staff their overseas branches with experienced employees who have a high degree of technical competence as well as extensive knowledge of company methods. However, some highly qualified young people, usually with secretarial and language skills, also may obtain immediate overseas employment with private firms.

### *Nonprofit organizations*

A variety of nonprofit organizations, such as hospitals, religious organizations, foundations, community and youth-serving organizations, health and welfare associations, and other philanthropic groups, employ qualified college graduates in a broad spectrum of professional occupations, depending upon the specific function of the organization.

The number of employment opportunities also is expanding in community and youth-serving organizations such as the Girl Scouts, Camp Fire Girls, YWCA, community chests and welfare councils, and volunteer service bureaus. Most of these organizations have more than doubled their activities in the past decade, with a resultant increase in professionally trained staffs.

## CONTINUING EDUCATION

### GRADUATE STUDY

A graduate degree is becoming increasingly important for professional advancement in many fields. Many new college graduates who hope eventually to continue their education, however, prefer to gain some work experience first, and in some instances this is encouraged. The important point is to realize the value of continuing education and to consider a plan that will include further education and professional growth.

Those strongly motivated to seek graduate education usually can find ways to finance advanced study. Possibilities include research or study fellowships, teaching fellowships, special loan funds, and part-time jobs. A little more than two-fifths of the graduate students in the United States received some sort of financial assistance during 1965. Probably the largest numbers of graduate students receiving such assistance were in science and engineering fields. Many others were aided by welfare and health agencies, which often help staff members undertake part-time study or provide for educational leave. Some were career employees of business firms and government agencies that encourage special training and sometimes help finance it.

### FELLOWSHIPS AND LOANS

Since all scholarship and fellowship programs are forwarded to the deans of colleges and universities, they are a good point at which to start investigation.

#### *Nongovernment*

Most colleges and universities that grant advanced degrees have some fellowships and teaching or research assistantships that en-

able graduate students to be fully or partially self-supporting while studying for a master's or doctor's degree. Some institutions also have a long-term loan program.

Grants for academic study also may be obtained from other sources, such as private foundations, professional associations, service clubs, national sororities, labor unions, and religious and social groups. Among women's organizations that offer scholarships and fellowships are:

Altrusa International, Inc.  
332 South Michigan Avenue  
Chicago, Ill. 60604

American Association of University Women  
2401 Virginia Avenue NW.  
Washington, D.C. 20037

Camp Fire Girls, Inc.  
65 Worth Street  
New York, N.Y. 10013

General Federation of Women's Clubs  
1734 N Street NW.  
Washington, D.C. 20036

Girl Scouts of the United States of America  
830 Third Avenue  
New York, N.Y. 10022

National Federation of Business and Professional Women's  
Clubs, Inc.  
2012 Massachusetts Avenue NW.  
Washington, D.C. 20036

Young Women's Christian Association, National Board  
600 Lexington Avenue  
New York, N.Y. 10022

A number of organizations in this country have graduate fellowship programs for study or research in foreign countries. Often these programs are very specialized and are only for students who want to do graduate work in a specific field that is of interest to the sponsoring organization.

### *Government fellowships and loans*

Government programs of financial aid for college students make funds available in the form of fellowships or loans for graduate study and research in certain fields.

The National Defense Education Act of 1958 was designed to give graduate students financial assistance through two programs—the graduate fellowship program and the loan program. Graduate fellowships for full-time study are limited to predoctoral students who intend to become college professors. The loan program is much broader in scope, providing a maximum of \$2,500 annually to graduate and professional students and \$1,000 in any one academic year to undergraduate students. Total individual loans may not exceed \$5,000 for undergraduate work nor \$10,000 for combined undergraduate and graduate study. The recipient of the loan does not start repaying until 1 year after leaving college. More than 193,000 such loans, amounting to more than \$166 million, were made in 1964–65.

Under the Health Professions Educational Assistance Amendments of 1965, a loan program to prevent a shortage of doctors, dentists, and other medical personnel was expanded. Students may borrow \$10,000 for a 4-year course in medical or dental schools.

The National Institutes of Health award fellowships for graduate work at predoctoral and postdoctoral levels. These fellowships are for research in public health, medicine, dentistry, nursing, and such related health fields as mental health, cancer, and heart disease.

The National Science Foundation awards fellowships at all levels of graduate study—including the postdoctoral level—in the mathematical, physical, medical, biological, and engineering sciences, anthropology, economics, geography, the history and/or philosophy of science, linguistics, political science, psychology, and sociology. Also included are interdisciplinary areas where two or more sciences overlap, such as geochemistry, meteorology, and oceanography.

The U.S. Government supports one of the largest international scholarship programs in the world as a part of the International Exchange Program of the Department of State. The majority of the

grants come under the Fulbright-Hayes Act. Each year about 900 American graduate students receive these grants—covering travel expenses, living costs, tuition, and books—to engage in study or research in 73 countries. To be eligible for one of these grants, a student must be a college graduate with a high academic record and must be fluent in the language of the country where he or she will be studying.

### *Sources of information on financial help*

Information on fellowships, loans, and assistantships for graduate study as well as for undergraduate work is listed in catalogs issued by the U.S. Office of Education (see chapter 6, Sources). Financial help for graduate students is available also at one or more institutions of higher education in every State and the District of Columbia.

A listing of fellowships in the field of social work can be found in "Social Work Fellowships and Scholarships in Canada and the United States." The latest report, covering the academic years 1965-66 and 1966-67, was compiled by the National Commission for Social Work Careers, 345 East 46th Street, New York, N.Y. 10017.

Information on sources of research and training fellowships in the social sciences can be obtained from the Social Science Research Council, 1755 Massachusetts Avenue NW., Washington, D.C. 20036.

"A Selected List of Major Fellowship Opportunities and Aids to Advanced Education for United States Citizens" and a similar publication for foreign nationals are issued by the National Academy of Sciences, National Research Council, 2101 Constitution Avenue NW., Washington, D.C. 20418.

Those interested in doing graduate work at a specific college or university should write directly to the school of their choice to find out about programs of financial assistance. Professional associations generally have information on fellowships offered in a particular field and how to apply for them. College libraries, as well as deans' offices, usually have information on graduate fellowships at other colleges and universities.

## DEGREES EARNED

In the academic year 1964-65, a total of 219,260 bachelor's degrees (or first professional degrees, including M.D. and D.D.S.), 35,984 master's degrees, and 1,775 doctor's degrees were conferred on women.

The largest number of bachelor's degrees granted to women was in the field of education, 91,019; the next largest numbers were in the social sciences, 30,641, and in English and journalism, 24,974 (table 1). Women received more than three-fourths of the bachelor's degrees in education, less than half of the master's degrees, and a fifth of the doctor's degrees.

TABLE 1.—*Degrees Earned by Women, by Field of Study and Level, 1964-65*

Field of study	Bachelor's degrees <sup>1</sup>		Master's degrees		Doctor's degrees	
	Number	Per-cent	Number	Per-cent	Number	Per-cent
Total.....	219,260	100	35,984	100	1,775	100
Education <sup>2</sup> .....	91,019	42	20,765	58	529	30
Social sciences.....	30,641	14	2,464	7	190	11
English and journalism.....	24,974	11	2,908	8	151	9
Health professions.....	12,080	6	1,112	3	16	1
Fine and applied arts.....	10,222	5	1,771	5	68	4
Foreign languages and literature..	9,947	5	1,539	4	121	7
Biological sciences.....	7,402	3	975	3	230	13
Mathematical subjects.....	6,449	3	806	2	59	3
Psychology.....	6,033	3	732	2	159	9
Business and commerce.....	5,108	2	241	1	6	( <sup>3</sup> )
Home economics.....	5,099	2	659	2	46	3
Physical sciences.....	2,532	1	513	1	127	7
Library science.....	2,285	1	713	2	1	( <sup>3</sup> )
Religion.....	1,540	1	242	1	19	1
Other fields.....	3,929	2	544	2	53	3

<sup>1</sup> Includes also first professional degrees requiring 5 years or more of study.

<sup>2</sup> Includes those who earned degrees in art education, business and commercial education, elementary education, home economics education, music education, physical education, secondary education, speech and hearing, and others.

<sup>3</sup> Less than 0.5 percent.

Source: U.S. Department of Health, Education, and Welfare, Office of Education: Summary Report on Bachelor's and Higher Degrees Conferred During the Year 1964-65.

## MARRIAGE AND CAREER

No longer is it customary in our society for a girl to have to choose between marriage and a career. In fact, in 1966 nearly three-fifths of all women workers were married (husband present). More than one married woman (husband present) in every three was in the labor force in 1966, as compared with one in seven in 1940.

According to a survey of women college graduates of the class of 1957, four out of five were employed shortly after graduation—and these chiefly on a full-time basis.\* Nearly half of those who were not working were attending school and presumably intended to seek employment later. Seven years after graduation, the percentage of workers in the survey group had dropped considerably, with slightly more than half of the women graduates in the labor force.\*\* And in another survey 15 years after graduation of college alumnae of the class of 1945, it was found that one-fourth of the married graduates were employed, and 80 percent of those not working indicated an interest in future employment.\*\*\*

It appears to be the pattern today for most college women to be employed for a few years after completing college and then to become full-time homemakers. When their children become teenagers, mothers often wish or need to return to paid employment—either full time or part time.

It is important, therefore, for a woman with a profession or specialized skill to keep in touch with her academic field during the years when homemaking and motherhood take most of her time. It is realized, of course, that frequently it is not easy to do this if home responsibilities are demanding. However, there are various ways a woman can try to maintain her professional skills during the years

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\*First Jobs of College Women—Report on Women Graduates, Class of 1957. Women's Bureau Bull. 268. 1959. This publication covers a survey made by the Women's Bureau in cooperation with the National Vocational Guidance Association. The report was based on information from June 1957 graduates 6 months after graduation.

\*\*College Women Seven Years After Graduation—Resurvey of Women Graduates Class of 1957. Women's Bureau Bull. 292. 1966.

\*\*\*Fifteen Years After College—A Study of the Alumnae of the Class of 1945. Women's Bureau Bull. 283. 1962.

when her primary responsibilities are to family and home. For example:

She can retain her membership in professional associations, subscribe to technical journals, and perhaps occasionally attend annual conferences of her professional association.

She can take occasional courses. The increase in the number of localities served by university extension departments and the development of more community colleges make this possibility more feasible than ever before.

She can attend lectures or institutes. Her attendance will not only help refresh her memory about certain subject matter but will also put her in touch with others in her profession.

She can find some way to practice her skills. A recreation worker may do volunteer work for the local Scout troop, and a teacher may tutor or serve as a substitute teacher.

## COLLEGE WOMEN ON THE JOB

About 33.8 million women worked at some time during 1965. In fact, nearly half of all women of working age (14 years and over) in the United States had some work experience in that year. Some worked only part of the year or were employed on a part-time basis, but almost two-fifths held full-time jobs for the entire year.

Women employed in professional occupations represented the fourth largest group of women workers in 1966. Roughly one out of every seven women workers was in a professional job. Numerically, professional workers were exceeded by clerical workers, operatives, and service workers (except private household).

### PROFESSIONAL EMPLOYMENT INCREASES

Almost 2.8 million women had a professional, technical, or kindred position in 1960—a 41-percent increase in 10 years (table 2).

The longtime trend toward broadening women's occupational opportunities has been particularly noticeable in the professions. In 1940 about three-fourths of the women professional workers were engaged in teaching and nursing. Twenty years later women in these two professions accounted for only about two-thirds of all women professional workers, although their actual numbers in these professions had increased considerably. On the other hand, women's representation increased among accountants, public relations workers, engineers, recreation and group workers, chemists, and personnel and labor relations workers as well as in several other professional and technical occupations.

Today women are entering a much greater variety of professional positions than ever before. There are significant numbers of women in numerous fields of professional work. In addition to teachers and

nurses, the 1960 census recorded over 30,000 women in each of the following occupational groups: musicians and music teachers; accountants and auditors; librarians; social and welfare workers (except group); college presidents, professors, and instructors; editors and reporters; religious workers; and personnel and labor relations workers.

TABLE 2.—*Women in Professional, Technical, and Kindred Occupations, 1960 and 1950*

Occupation	1960		1950		Per- cent in- crease 1950 to 1960
	Number	Per- cent	Number	Per- cent	
Total employed.....	2, 753, 052	100. 0	1, 951, 072	100. 0	41
Teachers <sup>1</sup> .....	1, 196, 526	43. 5	839, 229	43. 0	43
Nurses (professional).....	567, 884	20. 6	390, 594	20. 0	45
Musicians, music teachers.....	109, 638	4. 0	78, 111	4. 0	40
Accountants, auditors.....	79, 045	2. 9	56, 011	2. 9	41
Librarians.....	71, 836	2. 6	49, 267	2. 5	46
Social and welfare workers (except group)	60, 667	2. 2	52, 527	2. 7	15
College presidents, professors, instruc- tors.....	38, 850	1. 4	28, 991	1. 5	34
Editors, reporters.....	37, 438	1. 4	26, 758	1. 4	40
Religious workers.....	35, 099	1. 3	29, 037	1. 5	21
Personnel, labor relations workers.....	30, 215	1. 1	15, 093	. 8	100
Sports instructors, officials.....	24, 931	. 9	11, 183	. 6	123
Dietitians, nutritionists.....	24, 237	. 9	21, 132	1. 1	15
Therapists, healers.....	19, 752	. 7	12, 176	. 6	62
Physicians, surgeons.....	15, 513	. 6	11, 752	. 6	32
Recreation, group workers.....	15, 497	. 6	6, 763	. 3	129
Natural scientists.....	14, 738	. 5	13, 354	. 7	10
Social scientists.....	14, 177	. 5	11, 412	. 6	24
Lawyers, judges.....	7, 434	. 3	6, 271	. 3	19
Engineers (technical).....	7, 211	. 3	6, 499	. 3	11
Pharmacists.....	7, 129	. 3	7, 295	. 4	<sup>2</sup> 2
Public relations workers, publicity writers.....	7, 005	. 3	1, 958	. 1	258
Other occupations.....	368, 230	13. 4	275, 659	14. 1	37

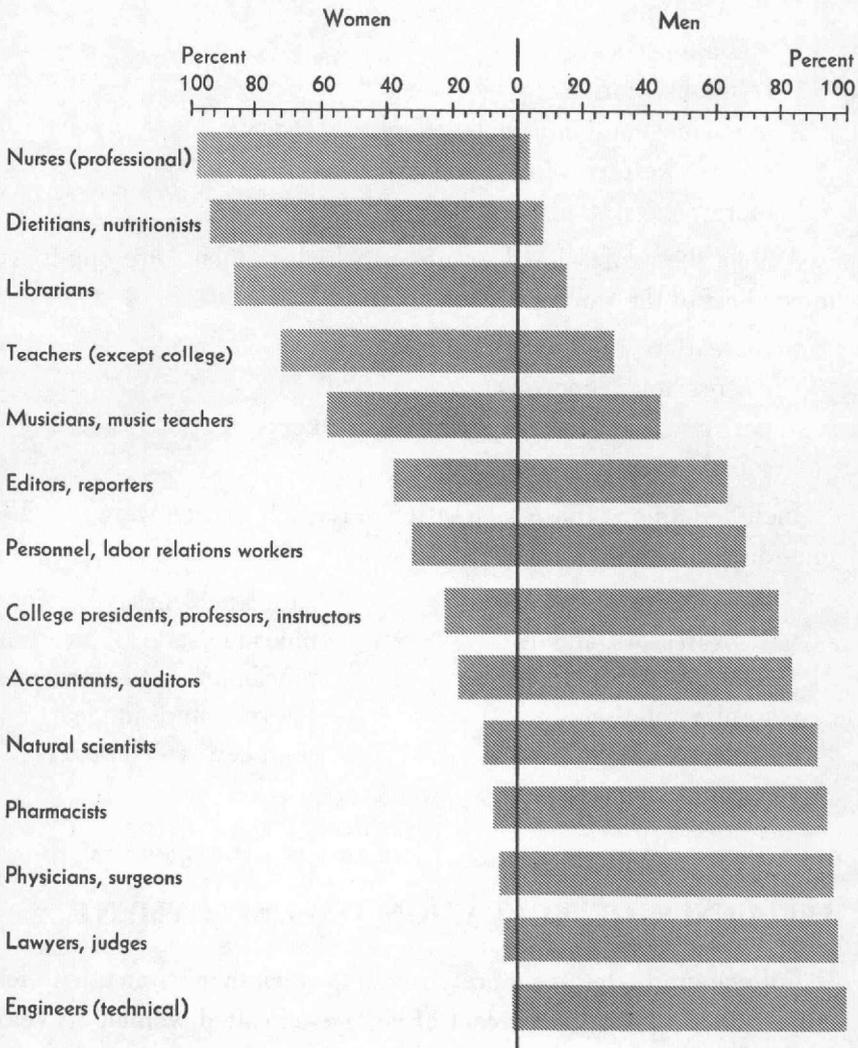
<sup>1</sup> Category does not include art, music, dancing, or physical education teachers who are classified elsewhere.

<sup>2</sup> A decrease instead of an increase.

### WOMEN'S REPRESENTATION IN SPECIFIC PROFESSIONS

Women are recognized for their contributions in virtually all the professions. As reported in the 1960 census, they constitute large proportions of the workers in some professions, but only small proportions in others (chart A).

Chart A.—PROPORTION OF WOMEN AND MEN EMPLOYED IN SELECTED PROFESSIONAL OCCUPATIONS, 1960



Source: U.S. Department of Commerce, Bureau of the Census: 1960 Census of Population.

Women accounted for more than three-fourths of the persons employed as:

- nurses
- dietitians
- librarians
- dancers and dancing teachers

Among other important professions for women, as indicated by the fact that they represented one-half to three-fourths of all the workers, were:

- schoolteachers
- religious workers
- musicians and music teachers
- social, welfare, and recreation workers
- therapists and healers

Among the professional groups in which women were one-fourth to one-half of the workers were:

- recreation and group workers
- editors and reporters
- personnel and labor relations workers
- social scientists

Included among those occupations in which women were less than one-fourth of the total were:

college presidents,	natural scientists
professors, and in-	pharmacists
structors	physicians and surgeons
public relations	lawyers and judges
workers	engineers (technical)
accountants and audi-	
tors	

## INFLUENCE OF EDUCATION ON EMPLOYMENT

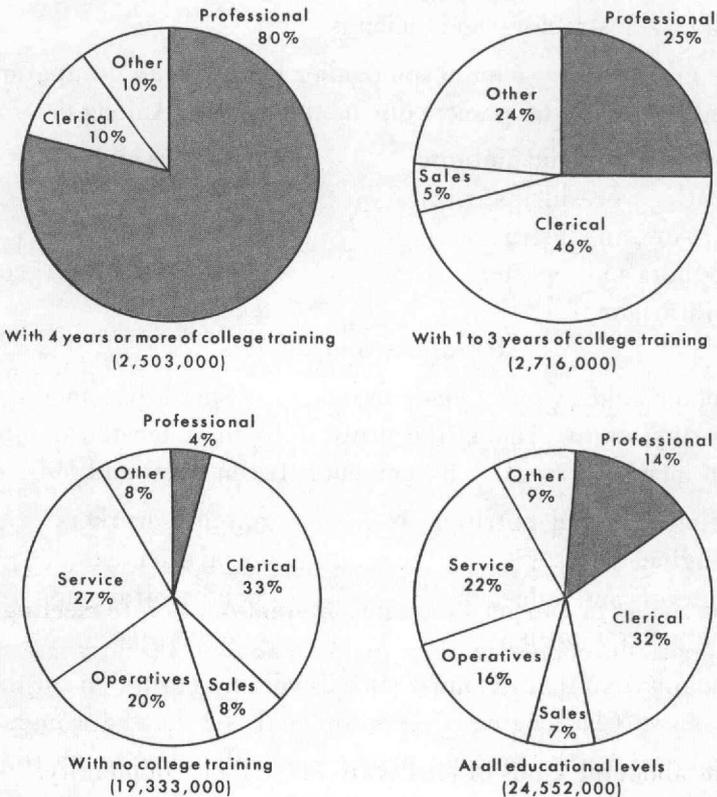
College graduates are more likely to work than women with less education. In 1966, 56 percent of college-educated women 18 years of age and over were in the labor force, in contrast to 46 percent of

those with high school diplomas, and 30 percent of those who did not go beyond elementary school.

The amount of education obtained by a woman also influences strongly the type of job she can obtain. In 1966, 81 percent of the employed women with 4 years or more of college held professional jobs. Ten percent held clerical jobs and 4 percent were managers and officials. This is in contrast to the employed women who had 1 to 3 years of college: only 25 percent of them held professional jobs. Of those with a high school diploma only, a mere 7 percent were in professional occupations (chart B).

CHART B

**Major Occupational Groups of Employed Women,  
by Educational Level, March 1966**  
(WOMEN 18 YEARS OF AGE AND OVER)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

## WOMEN'S GAINS

During the 1950's, the professions in which women made their most significant employment gains—in terms of either percentage increases or numbers of workers—were those relating to service and social needs of society (chart C). In contrast, during the 1940's, the greatest expansion in women's employment occurred in such war-related occupations as chemist, engineer, draftsman, and radio operator.

Among the professions in which the number of women more than doubled between 1950 and 1960 were:

mathematicians  
 personnel and labor relations workers  
 public relations workers and publicity writers  
 recreation and group workers  
 sports instructors and officials

The number of women in some other professional occupations increased from 30 to 60 percent during this period. Among these were:

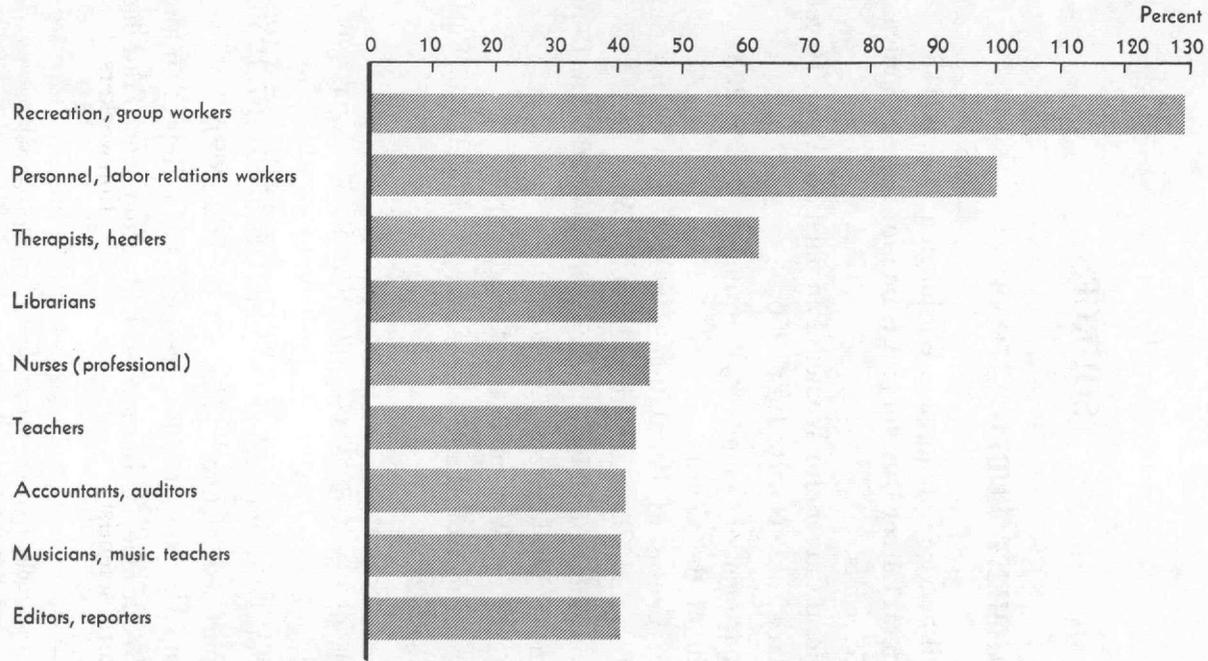
accountants and auditors	musicians and music
college presidents, profes-	teachers
sors, and instructors	nurses
editors and reporters	physicians and surgeons
librarians	teachers
	therapists and healers

In other fields, women made numerically small, but none the less noteworthy, gains. Among the professions in which the number of women increased by 10 to 30 percent between 1950 and 1960 were:

dietitians and nutritionists	religious workers
engineers	social scientists
lawyers and judges	social welfare and recrea-
natural scientists	tion workers

It is apparent that job horizons will continue to widen for the college woman. Challenging careers for qualified college women have never before existed in such variety—nor offered so many rewards.

Chart C.—PERCENT INCREASE IN THE NUMBER OF WOMEN EMPLOYED IN SELECTED PROFESSIONAL OCCUPATIONS  
1950-60



Source: U.S. Department of Commerce, Bureau of the Census: 1960 Census of Population.

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**GOVERNMENT PUBLICATIONS\***

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 Federal Career Directory: A Guide for College Students. 1966.  
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- U.S. Department of Commerce, Washington, D.C. 20233  
 Bureau of the Census  
 U.S. Census of Population, 1960: United States Summary,  
 Detailed Characteristics. 1963. \$2.50.
- U.S. Department of Defense (in cooperation with U.S. Department  
 of Labor), Washington, D.C. 20310  
 Careers for Women in the Armed Forces.
- U.S. Department of Health, Education, and Welfare, Washington,  
 D.C. 20201  
 Office of Education  
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 Federal Aids for College Students. OE-55001-67. 1966.
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 Manpower Report of the President and a Report on Manpower  
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 1967. \$1.50.

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\*Government publications may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at prices listed, with a discount of 25 percent on orders of 100 copies or more. Publications for which no price is listed may be obtained free from the designated agency. Single copies of Women's Bureau publications may be obtained without charge from the Women's Bureau.

## Bureau of Labor Statistics

Employment and Earnings and Monthly Report on the Labor Force. 65 cents, \$7 a year.

Occupational Outlook Handbook: Career Information for Use in Guidance, 1966-67 ed. Bull. No. 1450. \$5.00.\*

## Manpower Administration

Health Careers Guidebook. 1966.

Occupations in the Care and Rehabilitation of the Mentally Retarded. 1966.

Occupations in the Field of Library Science. 1966.

## Women's Bureau

Background Facts on Women Workers in the United States. May 1967.

Bibliography on American Women Workers. Reprint from 1965 Handbook on Women Workers. 1966.

Clerical Occupations for Women—Today and Tomorrow. Bull. 289. 1964. 35 cents.

College Women Seven Years After Graduation—Resurvey of Women Graduates Class of 1957. Bull. 292. 1966. 40 cents.

Continuing Education Programs for Women. Pamphlet 10. 1966. 20 cents.

## Fact Sheet on—

The Changing Pattern of Women's Lives. March 1967.

Educational Attainment of Nonwhite Women. May 1967.

Trends in Educational Attainment of Women. June 1967.

Fifteen Years After College—A Study of Alumnae of the Class of 1945. Bull. 283. 1962. 15 cents.

First Jobs of College Women—Report of Women Graduates, Class of 1957. Bull. 268. 1959. 35 cents.

Job Training Suggestions for Women and Girls. Leaflet 40. 1965. 10 cents.

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\*A limited number of reprints are available from the Women's Bureau on the following professions: Accountants; Architects; Biological Scientists; Dentists; Dietitians; Engineers; Home Economists; Lawyers; Librarians; Mathematicians, Statisticians, and Actuaries; Medical Record Librarians; Medical Technologists; Occupational Therapists; Personnel Workers; Physical Scientists; Psychologists; Real Estate Salesmen and Brokers; Recreation Workers; Registered Professional Nurses; Social Scientists; Social Workers; Teachers; and Technical Writers.

- 1965 Handbook on Women Workers. Bull. 290. 1966. \$1.00.  
U.S. Department of State, Washington, D.C., 20520
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1966.

### **SELECTED READINGS ON EMPLOYMENT AND TRAINING OPPORTUNITIES IN THE PROFESSIONS**

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- So, You Want To Be a Doctor? New York, N.Y. American Medical Women's Association, Inc. 1958.
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- Technical Writing as a Career. *In National Business Woman*, May 1965.
- The Big Story: The Booming Career Field of Journalism and Communications. Chicago, Ill. Sigma Delta Chi.

## PROFESSIONAL AND BUSINESS ORGANIZATIONS

Additional information on specific occupational fields may be obtained from the following professional and business organizations:

American Association of Industrial Nurses, Inc.  
170 East 61st Street  
New York, N.Y. 10021

American Association of Medical Record Librarians  
840 North Lake Shore Drive  
Chicago, Ill. 60611

American Association of Nurse Anesthetists  
Suite 3010  
Prudential Plaza  
Chicago, Ill. 60601

American Dental Hygienists' Association  
100 East Ohio Street  
Chicago, Ill. 60611

American Dietetic Association  
620 North Michigan Avenue  
Chicago, Ill. 60611

American Home Economics Association  
1600 20th Street NW.  
Washington, D.C. 20009

American Institute of Biological Sciences  
3900 Wisconsin Avenue NW.  
Washington, D.C. 20016

American Institute of Interior Designers  
673 Fifth Avenue  
New York, N.Y. 10022

American Library Association  
50 East Huron Street  
Chicago, Ill. 60611

American Medical Women's Association, Inc.  
1790 Broadway  
New York, N.Y. 10019

American Newspaper Women's Association, Inc.  
1607 22d Street NW.  
Washington, D.C. 20008

American Nurses' Association, Inc.  
10 Columbus Circle  
New York, N.Y. 10019

American Occupational Therapy Association  
250 West 57th Street  
New York, N.Y. 10019

American Pharmaceutical Association  
2215 Constitution Avenue NW.  
Washington, D.C. 20037

American Physical Therapy Association  
1790 Broadway  
New York, N.Y. 10019

American Society of Medical Technologists  
Suite 25  
Herman Professional Building  
Houston, Tex. 77025

American Society of Radiologic Technologists  
537 South Main Street  
Fond du Lac, Wis. 54935

American Society of Women Accountants  
327 South LaSalle Street  
Chicago, Ill. 60604

American Women in Radio and Television, Inc.  
75 East 55th Street  
New York, N.Y. 10022

Association of American Women Dentists  
6115 La Vista Drive  
Dallas, Tex. 75214

Fashion Group, Inc., The  
9 Rockefeller Plaza  
New York, N.Y. 10020

International Association of Personnel Women  
405 Lexington Avenue  
New York, N.Y. 10017

National Association of Bank-Women, Inc.  
60 East 42d Street  
New York, N.Y. 10017

National Association of Insurance Women  
Room 330-E  
823 South Detroit Avenue  
Tulsa, Okla. 74120

National Association of Legal Secretaries  
6953 Columbia Place  
University City, Mo. 63130

National Association of Women Lawyers  
American Bar Center  
1155 East 60th Street  
Chicago, Ill. 60637

National Commission for Social Work Careers  
345 East 46th Street  
New York, N.Y. 10017

National Committee for Careers in Medical Technology  
1501 New Hampshire Avenue NW.  
Washington, D.C. 20036

National Council of Administrative Women in Education  
1201 16th Street NW.  
Washington, D.C. 20036

National Federation of Music Clubs  
Suite 1215  
600 South Michigan Avenue  
Chicago, Ill. 60605

National League for Nursing  
10 Columbus Circle  
New York, N.Y. 10019

National Recreation and Parks Association  
1404 New York Avenue NW.  
Washington, D.C. 20005

National Secretaries Association (International)  
1103 Grand Avenue  
Kansas City, Mo. 64106

Society of Woman Geographers  
1216 Connecticut Avenue NW.  
Washington, D.C. 20036

Society of Women Engineers  
United Engineering Center  
345 East 47th Street  
New York, N.Y. 10017

Society of Technical Writers and Publishers, Inc.  
Post Office Box 3706  
Beechwold Station  
Columbus, Ohio 43214

Special Libraries Association  
31 East 10th Street  
New York, N.Y. 10003

Women Leaders Round Table, The National Association of Life  
Underwriters  
c/o Union Central Life Insurance Co.  
225 Broadway  
New York, N.Y. 10007

Women's Council of the National Association of Real Estate  
Boards  
155 East Superior Street  
Chicago, Ill. 60611

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WASHINGTON, D.C. 20210

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