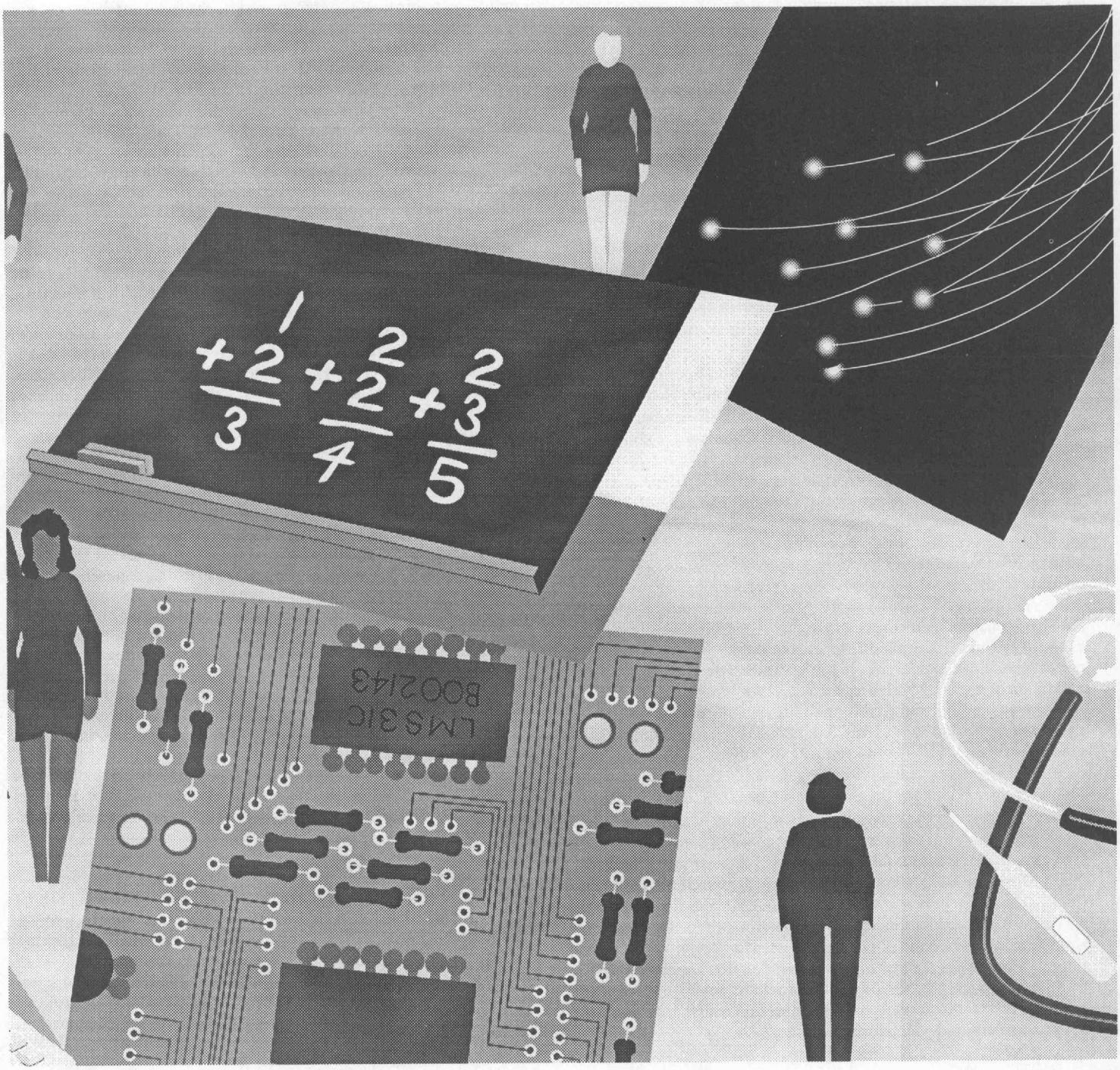
Social Scientists and Legal Occupations

ISBN 0-16-043052-6

Reprinted from the
Occupational Outlook Handbook, 1994-95 Edition

U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 2450-5



Social Scientists and Urban Planners

(D.O.T. 029.067; 045.061, .067, .107-022, -026, -030, -034, -046; 050.067; 051; 052 except .067-014; 054; 055; 059; 188.167-110; and 199.167-040)

Nature of the Work

Social scientists study all aspects of human society—from the distribution of goods and services to the beliefs of newly formed religious groups to modern mass transportation systems. Social science research provides insights that help us understand the different ways in which individuals and groups make decisions, exercise power, or respond to change. Through their studies and analyses, social scientists and urban planners assist educators, government officials, business leaders, and others in solving social, economic, and environmental problems.

Research is a basic activity for many social scientists. They use established or newly discovered methods to assemble facts and theory that contribute to human knowledge. Applied research usually is designed to produce information that will enable people to make better decisions or manage their affairs more effectively. Interviews and surveys are widely used to collect facts, opinions, or other information. Data collection takes many other forms, however, including living and working among the people studied; archaeological and other field investigations; the analysis of historical records and documents; experiments with human subjects or animals in a psychological laboratory; the administration of standardized tests and questionnaires; and the preparation and interpretation of maps and graphic materials.

Social sciences are interdisciplinary in nature. Specialists in one field often find that the research they are performing overlaps work that is being conducted in another social science discipline. Regardless of their field of specialization, social scientists are concerned with some aspect of society, culture, or personality.

Anthropologists study the origin and the physical, social, and cultural development and behavior of humans. They may study the way of life, remains, language, or physical characteristics of people in various parts of the world; they compare the customs, values, and social patterns of different cultures. Anthropologists generally concentrate in sociocultural anthropology, archaeology, linguistics, or biological-physical anthropology. Sociocultural anthropologists study the customs, cultures, and social lives of groups in a wide range of settings from nonindustrialized societies to modern urban cultures. Archaeologists engage in the systematic recovery and examination of material evidence, such as graves, buildings, tools, and pottery, remaining from past human life and culture, to determine the history, customs, and living habits of earlier civilizations. Linguistic anthropologists study the role of language in various cultures. Biological-physical anthropologists study the evolution of the human body and look for the earliest evidences of human life.

Economists study the production, distribution, and consumption of commodities and services. They may conduct surveys and analyze data to determine public preferences for these goods and services. Most economists are concerned with the practical applications of economic policy in a particular area, such as finance, labor, agriculture, transportation, energy, or health. Others develop theories to explain economic phenomena such as unemployment or inflation. *Marketing research analysts* research market conditions in localities, regions, the Nation, or the world to determine potential sales of a product or service; they examine and analyze data on past sales and trends to develop forecasts.

Geographers study the distribution of both physical and cultural phenomena on local, regional, continental, and global scales. Geographers specialize, as a rule. Economic geographers study the regional distribution of resources and economic activities. Political geographers are concerned with the relationship of geography to political phenomena—local, national, and international. Physical geographers study the distribution of climates, vegetation, soil, and land forms. Urban and transportation geographers study cities and metropolitan areas, while regional geographers study the physical, climatic, economic, political, and cultural characteristics of regions, ranging in size from a congressional district, to a State, country, continent, or the entire world. Medical geographers study health care delivery systems, epidemiology, and the effect of the environment on health.

Geographic Information Systems (GIS)—a relatively new specialty—combines computer graphics, artificial intelligence, and high-speed communication to store, retrieve, manipulate, analyze, and map geographic data. GIS is widely used in weather forecasting, emergency management, resource analysis and management, and other activities. (Some occupational classification systems include geographers under physical scientists rather than social scientists.)

Historians research and analyze the past. They use many sources of information during their research, including government and institutional records, newspapers and other periodicals, photographs, interviews, films, and unpublished manuscripts such as diaries and letters. Historians usually specialize in a specific country or region; in a particular time period; or in a particular field, such as social, intellectual, political, or diplomatic history. Biographers collect detailed information on individuals. Genealogists trace family histories. Other historians help study and preserve archival materials, artifacts, and historic buildings and sites.

Political scientists study the origin, development, and operation of political systems. They conduct research on a wide range of subjects such as relations between the United States and foreign countries, the beliefs and institutions of foreign nations, for example those in Asia and Africa, the politics of small towns or a major metropolis, or the decisions of the U.S. Supreme Court. Studying topics such as public opinion, political decisionmaking, and ideology, they analyze the structure and operation of governments as well as informal political entities. Depending on the topic under study, a political scientist might conduct a public opinion survey, analyze election results, or analyze public documents.

Psychologists, who constitute over half of all social scientists, study human behavior and use their expertise to counsel or advise individuals or groups. Their research also assists business advertisers, politicians, and others interested in influencing or motivating people. While clinical psychology is the largest specialty, psychologists specialize in many other fields such as counseling, experimental, social, or industrial psychology.

Sociologists analyze the development, structure, and behavior of groups or social systems such as families, neighborhoods, or clubs. Sociologists may specialize in a particular field such as criminology, rural sociology, or medical sociology.

Urban and regional planners develop comprehensive plans and programs for the use of land for industrial and public sites. Planners prepare for situations that are likely to develop as a result of population growth or social and economic change.

Working Conditions

Most social scientists have regular hours. Generally working behind a desk, either alone or in collaboration with other social scientists, they read and write research reports. Many experience the pressures of deadlines and tight schedules, and sometimes they must work overtime, for which they generally are not reimbursed. Social scientists often work as an integral part of a research team. Their routine may be interrupted frequently by telephone calls, letters to answer, special requests for information, meetings, or conferences. Travel

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-043052-6

may be necessary to collect information or attend meetings. Social scientists on foreign assignment must adjust to unfamiliar cultures and climates.

Some social scientists do fieldwork. For example, anthropologists, archaeologists, and geographers often must travel to remote areas, live among the people they study, and stay for long periods at the site of their investigations. They may work under primitive conditions, and their work may involve strenuous physical exertion.

Social scientists employed by colleges and universities generally have flexible work schedules, often dividing their time among teaching, research, consulting, or administrative responsibilities.

Employment

Social scientists held about 258,000 jobs in 1992. Over half of all social scientists are psychologists. About one-third of all social scientists—overwhelmingly psychologists—are self-employed, involved in counseling, consulting, or research.

Salaried social scientists worked for a wide range of employers. Nearly 4 out of 10 worked for Federal, State, and local governments; 3 out of 10 worked in health, research, and management services firms; and 2 out of 10 worked in educational institutions, as researchers, administrators, and counselors. Other employers include social service agencies, international organizations, associations, museums, historical societies, computer and data processing firms, and business firms.

In addition, many persons with training in a social science discipline teach in colleges and universities, and in secondary and elementary schools. (For more information, see the *Handbook* statements on college and university faculty, and kindergarten, elementary, and secondary school teachers.) The proportion of social scientists who teach varies by occupation—for example, the academic world generally is a more important source of jobs for graduates in sociology than for graduates in psychology.

Training, Other Qualifications, and Advancement

Educational attainment of social scientists is among the highest of all occupations. The Ph.D. or equivalent degree is a minimum requirement for most positions in colleges and universities and is important for advancement to many top level nonacademic research and administrative posts. Graduates with master's degrees generally have better professional opportunities outside of colleges and universities, although the situation varies by field. For example, job prospects for master's degree holders in urban or regional planning are brighter than for master's degree holders in history. Graduates with a master's degree in a social science discipline qualify for teaching positions in junior colleges. Bachelor's degree holders have limited opportunities and in most social science occupations do not qualify for "professional" positions. The bachelor's degree does, however, provide a suitable background for many different kinds of entry level jobs, such as research assistant, administrative aide, or management trainee. With the addition of sufficient education courses, social science graduates also can qualify for teaching positions in secondary and elementary schools.

Training in statistics and mathematics is essential for many social scientists. Mathematical and other quantitative research methods are increasingly used in economics, geography, political science, experimental psychology, and other fields. The ability to use computers for research purposes is mandatory in most disciplines.

Depending on their jobs, social scientists and urban planners may need a wide range of personal characteristics. Because they constantly seek new information about people, things, and ideas, intellectual curiosity and creativity are fundamental personal traits. The ability to think logically and methodically is important to a political scientist comparing the merits of various forms of government. The ability to analyze data is important to an economist studying proposals to reduce Federal budget deficits. Objectivity, openmindedness, and systematic work habits are important in all kinds of social science research. Perseverance is essential for an anthropologist, who might spend years accumulating artifacts from an ancient civilization. Emotional stability and sensitivity are vital to a clinical psychologist working with mental patients. Written and oral communication skills are essential to all these workers.

Job Outlook

Employment of social scientists is expected to grow faster than the average for all occupations through the year 2005, spurred by rising concern over the environment, crime, communicable disease, mental illness, the growing elderly and homeless populations, the increasingly competitive global economy, and a wide range of other issues. Psychologists, the largest social science occupation, is expected to grow much faster than average. Economists and marketing research analysts, urban and regional planners, and all other social scientists combined, including anthropologists, geographers, historians, political scientists, and sociologists, should experience average growth. Most job openings, however, will result from the need to replace social scientists who transfer to other occupations or stop working altogether.

Prospects are best for those with advanced degrees, and generally are better in disciplines such as economics, psychology, and urban and regional planning, which offer many opportunities in nonacademic settings. However, graduates in all social science fields are expected to find enhanced job opportunities in applied fields due to the excellent research, communication, and quantitative skills they develop in school. Government agencies, health and social service organizations, marketing, research and consulting firms, and a wide range of businesses seek social science graduates.

Social scientists currently face stiff competition for academic positions. However, competition may ease in the future due to a wave of retirements expected among college and university faculty. The growing importance and popularity of social science subjects in secondary schools is strengthening the demand for social science teachers at this level as well.

Other considerations that affect employment opportunities in these occupations include specific skills and technical expertise, desired work setting, salary requirements, and geographic mobility. In addition, experience acquired through internships can prove invaluable later in obtaining a full-time position in a social science field.

Earnings

Median annual earnings of all social scientists were about $36,700 in 1992. The middle 50 percent earned between $24,700 and $51,300 annually. The lowest 10 percent earned under $17,800, while the highest 10 percent earned over $68,700.

According to a 1993 survey by the College Placement Council, people with a bachelor's degree in a social science field received starting offers averaging about $19,000 a year in 1993, those with a master's degree in a social science field received starting offers averaging about $28,400 a year in 1993, and the average salary offer for doctoral social scientists was $30,000.

In the Federal Government, social scientists with a bachelor's degree and no experience could start at $18,300 or $22,700 a year in 1993, depending on their college records. Those with a master's degree could start at $27,800, and those having a Ph.D. degree could begin at $33,600, while some individuals with experience and an advanced degree could start at $40,300. The average salary of all social scientists working for the Federal Government in nonsupervisory, supervisory, and managerial positions was about $43,000 in 1993.

Social scientists entering careers in higher education may receive benefits such as summer research money, computer access, student research assistants, and secretarial support.

Related Occupations

A number of fields that require training and personal qualities similar to those of the various social science fields are covered elsewhere in the *Handbook*. These include lawyers, statisticians, mathematicians, computer programmers, computer scientists and systems analysts, reporters and correspondents, social workers, religious workers, college and university faculty, and counselors.

Sources of Additional Information

More detailed information about economists and marketing research analysts, psychologists, sociologists, and urban and regional planners is presented in the *Handbook* statements that follow this introductory statement.

Anthropology

For information about careers, job openings, grants and fellowships, and schools that offer training in anthropology, and for a copy of *Getting a Job Outside the Academy* (special publication no. 14), contact:

☞ The American Anthropological Association, 4350 N. Fairfax Dr., Suite 640, Arlington, VA 22203.

Archaeology

For information about careers in archaeology, contact:

☞ Society for American Archaeology, 900 2nd St. NE., #12, Washington, DC 20002.

☞ Archaeological Institute of America, 675 Commonwealth Ave., Boston, MA 02215.

Geography

Two publications that provide information on careers and job openings for geographers—*Geography—Today's Career for Tomorrow*, available free of charge, and *Careers in Geography*, available for $3—and the annual publication listing schools offering various programs in geography—*A Guide to Programs of Geography in the U.S. and Canada*—may be obtained from:

☞ Association of American Geographers, 1710 16th St. NW., Washington, DC 20009.

History

Information on careers for students of history is available from:

☞ American Historical Association, 400 A St. SE., Washington, DC 20003.

General information on careers for historians is available from:

☞ Organization of American Historians, 112 North Bryan St., Bloomington, IN 47408.

For additional information on careers for historians, send a self-addressed, stamped envelope to:

☞ American Association for State and Local History, 530 Church St., 6th Floor, Nashville, TN 37219.

Political Science

Information on careers and job openings, including *Careers and the Study of Political Science: A Guide for Undergraduates*, available for $3.50 plus $1.00 postage and handling, with bulk rates for multiple copies, may be purchased from:

☞ American Political Science Association, 1527 New Hampshire Ave. NW., Washington, DC 20036.

Programs in Public Affairs and Administration, a biennial directory that contains data on the academic content of programs, the student body, the format of instruction, and other information, may be purchased from:

☞ National Association of Schools of Public Affairs and Administration, 1120 G St. NW., Suite 730, Washington, DC 20005.

Economists and Marketing Research Analysts

(D.O.T. 050.067)

Nature of the Work

Economists. Economists study the ways a society uses scarce resources such as land, labor, raw materials, and machinery to produce goods and services. They analyze the costs and benefits of distributing and consuming these goods and services. Economists conduct research, collect and analyze data, monitor economic trends, and develop forecasts. Their research might focus on topics such as energy costs, inflation, interest rates, farm prices, rents, imports, or employment.

Most economists are concerned with practical applications of economic policy in a particular area, such as finance, labor, agriculture, transportation, real estate, environment, natural resources, energy, or health. They use their understanding of economic relationships to advise business firms, insurance companies, banks, securities firms, industry and trade associations, labor unions, government agencies, and others. On the other hand, economists who are primarily theoreticians may use mathematical models to develop theories on the causes of business cycles and inflation, or the effects of unemployment and tax legislation.

Depending on the topic under study, economists devise methods and procedures for obtaining the data they need. For example, sampling techniques may be used to conduct a survey, and econometric modeling techniques may be used to develop forecasts. Preparing reports usually is an important part of the economist's job. He or she may be called upon to review and analyze all the relevant data, prepare tables and charts, and write up the results in clear, concise language. Being able to present economic and statistical concepts in a meaningful way is particularly important for economists whose research is policy directed.

Economists who work for government agencies assess economic conditions in the United States and abroad and estimate the economic effects of specific changes in legislation or public policy. For example, they may study how the dollar's fluctuation against foreign currencies affects import and export markets. Most government economists are in the fields of agriculture, business, finance, labor, transportation, utilities, urban economics, or international trade. Economists in the U.S. Department of Commerce study domestic production, distribution, and consumption of commodities or services; those in the Federal Trade Commission prepare industry analyses to assist in enforcing Federal statutes designed to eliminate unfair, deceptive, or monopolistic practices in interstate commerce; and those in the Bureau of Labor Statistics analyze data on prices, wages, employment, productivity, and safety and health. An economist working for a State or local government might analyze regional or local data on trade and commerce, industrial and commercial growth, and employment and unemployment, and project labor force trends.

Marketing Research Analysts. Marketing research analysts are concerned with the design, promotion, price, and distribution of a product or service. They provide information which is used to identify and define marketing opportunities; generate, refine, and evaluate marketing actions; and monitor marketing performance. Like economists, marketing research analysts devise methods and procedures for obtaining data they need. Marketing research analysts often design surveys and questionnaires; conduct telephone, personal, or mail interviews; and sometimes offer product samples to assess consumer preferences and indicate current trends. Once the data are compiled, marketing research analysts code, tabulate, and evaluate the data. They then make recommendations to management based upon their findings and suggest a course of action. They may provide management with information to make decisions on the promotion, distribution, design, and pricing of company products or services; or to determine the advisability of adding new lines of merchandise, opening new branches, or diversifying the company's operations. Analysts also conduct public opinion research to familiarize the media, government, lobbyists, and others with the needs and attitudes of the public. This can help political leaders and others assess public support for new taxes or spending on health, education, welfare, or defense, for example.

Marketing research analysts employed by large organizations may have a strong background in statistics or they may work with statisticians to select a group of people to be interviewed who accurately represent prospective customers of a product or service. Under an experienced marketing research analyst's direction, trained interviewers conduct surveys and office workers tabulate the results. The researchers must maintain confidentiality, accuracy, and good scientific methods in order to obtain useful results.

Working Conditions

Economists and marketing research analysts working for government agencies and private firms have structured work schedules. They may work alone writing reports, preparing statistical charts, and using computers and calculators. Or they may be an integral part of a research team. Most work under pressure of deadlines and tight schedules, and sometimes must work overtime. Their routine may be interrupted by special requests for data, letters, meetings, or

Economists and marketing research analysts use computers to prepare reports, develop surveys, and analyze data.

conferences. Travel may be necessary to collect data or attend conferences.

Economics and marketing faculty have flexible work schedules, and may divide their time among teaching, research, consulting, and administration.

Employment

Economists and marketing research analysts held about 51,000 jobs in 1992. Private industry—particularly economic and marketing research firms, management consulting firms, banks, securities and commodities brokers, and computer and data processing companies—employed 7 out of 10 salaried workers. The remainder, primarily economists, were employed by a wide range of government agencies, primarily in the Federal Government. The Departments of State, Labor, Agriculture, and Commerce are the largest Federal employers of economists. A number of economists and marketing research analysts combine a full-time job in government or business with part-time or consulting work in academia or another setting.

Employment of economists and marketing research analysts is concentrated in large cities—for example, New York City, Washington, D.C., and Chicago. Some economists work abroad for companies with major international operations; for the Department of State and other U.S. Government agencies; and for international organizations, including the World Bank and the United Nations.

Besides the jobs described above, many economists and marketing research analysts held economics and marketing faculty positions in colleges and universities. (See the statement on college and university faculty elsewhere in the *Handbook*.)

Training, Other Qualifications, and Advancement

A bachelor's degree with a major in economics or marketing is sufficient for many entry-level research, administrative, management trainee, and sales jobs. Economics majors can choose from a variety of courses, ranging from those which are intensly mathematical like microeconomics, macroeconomics, and econometrics, to more philosophical courses like the history of economic thought. In addition to courses in business, marketing, and consumer behavior, marketing majors should take courses in related disciplines, including economics, political science, psychology, organizational behavior, sociology, finance, business law, and international relations. Because of the importance of quantitative skills to economists and marketing researchers, courses in mathematics, statistics, econometrics, sampling theory and survey design, and computer science are highly recommended.

Aspiring economists and marketing research analysts can gain experience gathering and analyzing data, conducting interviews or surveys, and writing reports on their findings while in college. This experience can prove invaluable later in obtaining a full-time position in the field, since much of their work in the beginning centers around these duties. Beginning workers also may do considerable clerical work, such as copying data, editing and coding questions, and tabulating survey results. With further experience, economists and marketing research analysts eventually are assigned their own research projects.

Graduate training increasingly is required for many economist and marketing research analyst jobs, and for advancement to more responsible positions. Economics includes many specialties at the graduate level, such as advanced economic theory, mathematical economics, econometrics, history of economic thought, international economics, and labor economics. Students should select graduate schools strong in specialties in which they are interested. Marketing research analysts may earn a master's degree in business administration, marketing, statistics, or some related discipline. Some schools help graduate students find internships or part-time employment in government agencies, economic consulting firms, financial institutions, or marketing research firms. Like undergraduate students, work experience and contacts can be useful in testing career preferences and learning about the job market for economists and marketing research analysts.

In the Federal Government, candidates for beginning economist positions generally need a college degree with a minimum of 21 semester hours of economics and 3 hours of statistics, accounting, or calculus. Competition is keen, however, and additional education or experience may be required for some jobs.

For a job as a college instructor in many junior colleges and some 4-year schools, a master's degree is the minimum requirement. In most colleges and universities, however, a Ph.D. is necessary for appointment as an instructor. Similar to other disciplines, a Ph.D. and extensive publication are required for a professorship and for tenure.

In government, industry, research organizations, and consulting firms, economists and marketing research analysts who have a graduate degree usually can qualify for more responsible research and administrative positions. A Ph.D. is necessary for top positions in many organizations. Many corporation and government executives have a strong background in economics or marketing.

Persons considering careers as economists or marketing research analysts should be able to work accurately with detail since much time is spent on data analysis. Patience and persistence are necessary qualities since economists and marketing research analysts may spend long hours on independent study and problem solving. At the same time, they must be able to work well with others, especially marketing research analysts, who often interview a wide variety of people. Economists and marketing research analysts must be objective and systematic in their work and be able to present their findings, both orally and in writing, in a clear, meaningful way. Creativity and intellectual curiosity are essential for success in these fields, just as they are in other areas of scientific endeavor.

Job Outlook

Employment of economists and marketing research analysts is expected to grow about as fast as the average for all occupations through the year 2005. Most job openings, however, are likely to result from the need to replace experienced workers who transfer to other occupations, or retire or leave the labor force for other reasons.

Opportunities for economists should be best in private industry and in research and consulting firms, as some companies contract out for economic research services rather than support a staff of full-time economists. The growing complexity of the global economy and increased reliance on quantitative methods of analyzing business trends, forecasting sales, and planning purchasing and production should spur demand for economists. The continued need for economic analyses by lawyers, accountants, engineers, health services administrators, education administrators, urban and regional planners, environmental scientists, and others also should result in additional jobs for economists. Other organizations, including trade associations, unions, and nonprofit organizations, may offer job opportunities for economists. Employment of economists in the Federal Government should decline in line with the rate of growth projected for the Federal workforce as a whole. Slower than average

employment growth is expected among economists in State and local government.

A strong background in economic theory, mathematics, statistics, and econometrics provides the tools for acquiring any specialty within the field. Those skilled in quantitative techniques and their application to economic modeling and forecasting and marketing research, including the use of computers, should have the best job opportunities.

Persons who graduate with a bachelor's degree in economics through the year 2005 should face keen competition for the limited number of economist positions for which they qualify. Related work experience—conducting research, developing surveys, or analyzing data, for example—while in school is a major asset in this competitive job market. Many graduates will find employment in government, industry, and business as management or sales trainees, or as research or administrative assistants. Economists with good quantitative skills are qualified for research analyst positions in a broad range of fields. Those with strong backgrounds in mathematics, statistics, survey design, and computer science may be hired by private firms for marketing research work. Those who meet State certification requirements may become high school economics teachers. The demand for secondary school economics teachers is expected to grow as economics becomes an increasingly important and popular course. (See the statement on kindergarten, elementary, and secondary school teachers elsewhere in the *Handbook*.)

Candidates who hold a master's degree in economics have better employment prospects than bachelor's degree holders. Some businesses and research and consulting firms seek master's degree holders who have strong computer and quantitative skills and can perform complex research, but do not command the high salary of a Ph.D. Master's degree holders are likely to face competition for teaching positions in colleges and universities; however, some may gain positions in junior and community colleges.

Opportunities will be best for Ph.D.'s. Ph.D. graduates should have opportunities to work as economists in private industry, research and consulting firms, and government. In addition, employment prospects for economists in colleges and universities should improve due to an expected wave of retirements among college faculty.

Demand for marketing research analysts should be strong due to an increasingly competitive global economy. Marketing research provides organizations valuable feedback from purchasers, allowing companies to evaluate consumer satisfaction and more effectively plan for the future. As companies seek to expand their market and consumers become better informed, the need for marketing professionals is increasing. Opportunities for marketing research analysts should be good in a wide range of employment settings, particularly in marketing research firms, as companies find it more profitable to contract out for marketing research services rather than supporting their own marketing department. Other organizations, including financial services organizations, health care institutions, advertising firms, manufacturing firms that produce consumer goods, and insurance companies may offer job opportunities for marketing research analysts. Like economists, graduates with related work experience or an advanced degree in marketing or a closely related business field should have the best job opportunities.

Earnings

According to a 1993 salary survey by the College Placement Council, persons with a bachelor's degree in economics received offers averaging $25,200 a year; in marketing, $24,100.

The median base salary of business economists in 1992 was $65,000, according to a survey by the National Association of Business Economists. Ninety percent of the respondents held advanced degrees. The highest salaries were reported by those who had a Ph.D., with a median salary of $78,000. Master's degree holders earned a median salary of $58,000, while bachelor's degree holders earned $51,000. The highest paid business economists were in the nondurable manufacturing, securities and investment, mining, banking, and real estate industries. The lowest paid were in academia and government.

The Federal Government recognizes education and experience in certifying applicants for entry level positions. In general, the entrance salary for economists having a bachelor's degree averaged about $18,300 a year in 1993; however, those with superior academic records could begin at $22,700. Those having a master's degree could qualify for positions at an annual salary of $27,800. Those with a Ph.D. could begin at $33,600, while some individuals with experience and an advanced degree could start at $40,300. Economists in the Federal Government in nonsupervisory, supervisory, and managerial positions averaged around $53,500 a year in 1993.

Like other college faculty, economists and marketing research analysts entering careers in higher education may receive benefits such as summer research money, computer access, money for student research assistants, and secretarial support.

Related Occupations

Economists are concerned with understanding and interpreting financial matters, among other subjects. Others with jobs in this area include financial managers, financial analysts, accountants and auditors, underwriters, actuaries, securities and financial services sales workers, credit analysts, loan officers, and budget officers.

Marketing research analysts are involved in social research, including the planning, implementation, and analysis of surveys to determine people's needs and preferences. Other jobs using these skills include social welfare research workers, employment research and planning directors, sociologists, and urban and regional planners.

Sources of Additional Information

For information on careers in economics and business, contact:

☞ National Association of Business Economists, 28790 Chagrin Blvd., Suite 300, Cleveland, OH 44122.

☞ The Margin Magazine, University of Colorado, 1420 Austin Bluffs Pkwy., Colorado Springs, CO 80918.

For information about careers and salaries in marketing research, contact:

☞ American Marketing Association, 250 South Wacker Dr., Suite 200, Chicago, IL 60606.

☞ Marketing Research Association, 2189 Silas Deane Hwy., Suite 5, Rocky Hill, CT 06067.

☞ Council of American Survey Research Organizations, 3 Upper Devon, Port Jefferson, NY 11777.

Psychologists

(D.O.T. 045.061, .067, .107-022, -026, -030, -034, and -046)

Nature of the Work

Psychologists study human behavior and mental processes to understand, explain, and change people's behavior. They may study the way a person thinks, feels, or behaves. Research psychologists investigate the physical, cognitive, emotional, or social aspects of human behavior. Pychologists in applied fields counsel and conduct training programs; do market research; apply psychological treatments to a variety of medical and surgical conditions; or provide mental health services in hospitals, clinics, or private settings.

Like other social scientists, psychologists formulate hypotheses and collect data to test their validity. Research methods depend on the topic under study. Psychologists may gather information through controlled laboratory experiments; personality, performance, aptitude, and intelligence tests; observation, interviews, and questionnaires; clinical studies; or surveys. Computers are widely used to record and analyze this information.

Since psychology deals with human behavior, psychologists apply their knowledge and techniques to a wide range of endeavors including human services, management, education, law, and sports. In addition to the variety of work settings, psychologists specialize in many different areas. *Clinical psychologists*—who constitute the largest specialty—generally work in independent or group practice or in hospitals or clinics. They may help the mentally or emotionally disturbed adjust to life and are increasingly helping all kinds of medical and surgical patients deal with their illnesses or injuries. They may work in physical medicine and rehabilitation settings, treating

patients with spinal cord injuries, chronic pain or illness, stroke, and arthritis and neurologic conditions, such as multiple sclerosis. Others help people deal with life stresses such as divorce or aging. Clinical psychologists interview patients; give diagnostic tests; provide individual, family, and group psychotherapy; and design and implement behavior modification programs. They may collaborate with physicians and other specialists in developing treatment programs and help patients understand and comply with the prescribed treatment. Some clinical psychologists work in universities, where they train graduate students in the delivery of mental health and behavioral medicine services. Others administer community mental health programs. *Counseling psychologists* use several techniques, including interviewing and testing, to advise people on how to deal with problems of everyday living—personal, social, educational, or vocational. (Also see the statements on counselors and social workers elsewhere in the *Handbook*.)

Developmental psychologists study the patterns and causes of behavioral change as people progress through life from infancy to adulthood. Some concern themselves with behavior during infancy, childhood, and adolescence, while others study changes that take place during maturity and old age. The study of developmental disabilities and how they affect a person and others is a new area within developmental psychology. *Educational psychologists* evaluate student and teacher needs, and design and develop programs to enhance the educational setting. *Experimental psychologists* study behavior processes and work with human beings and animals such as rats, monkeys, and pigeons. Prominent areas of experimental research include motivation, thinking, attention, learning and retention, sensory and perceptual processes, effects of substance use and abuse, and genetic and neurological factors in behavior.

Industrial and organizational psychologists apply psychological techniques to personnel administration, management, and marketing problems. They are involved in policy planning, applicant screening, training and development, psychological test research, counseling, and organizational development and analysis. For example, an industrial psychologist may work with management to develop better training programs and to reorganize the work setting to improve worker productivity or quality of worklife. *School psychologists* work with students, teachers, parents, and administrators to resolve students' learning and behavior problems. *Social psychologists* examine people's interactions with others and with the social environment. Prominent areas of study include group behavior, leadership, attitudes, and interpersonal perception.

Some relatively new specialties include cognitive psychology, health psychology, neuropsychology, and geropsychology. *Cognitive psychologists* deal with the brain's role in memory, thinking, and perceptions; some are involved with research related to computer programming and artificial intelligence. *Health psychologists* promote good health through health maintenance counseling programs that are designed, for example, to help people stop smoking or lose weight. *Neuropsychologists* study the relation between the brain and behavior. They often work in stroke and head injury programs. *Geropsychologists* deal with the special problems faced by the elderly. The emergence and growth of these specialties reflects the increasing participation of psychologists in providing direct services to special patient populations.

Other areas of specialization include psychometrics, psychology and the arts, history of psychology, psychopharmacology, and community, comparative, consumer, engineering, environmental, family, forensic, population, military, and rehabilitation psychology.

Working Conditions

A psychologist's specialty and place of employment determine working conditions. For example, clinical, school, and counseling psychologists in private practice have pleasant, comfortable offices and set their own hours. However, they often have evening hours to accommodate their clients. Some employed in hospitals, nursing homes, and other health facilities often work evenings and weekends, while others in schools and clinics work regular hours. Psychologists employed by academic institutions divide their time among teaching, research, and administrative responsibilities. Some maintain part-time consulting practices as well. In contrast to the many psychologists who have flexible work schedules, most in government and private industry have more structured schedules. Reading and writing research reports, they often work alone. Many experience the pressures of deadlines, tight schedules, and overtime work. Their routine may be interrupted frequently. Travel may be required to attend conferences or conduct research.

Psychologists counsel their clients on how to best deal with a variety of life's problems.

Employment

Psychologists held about 144,000 jobs in 1992. Educational institutions employed nearly 4 out of 10 salaried psychologists in positions involving counseling, testing, special education, research, and administration; hospitals, mental health clinics, rehabilitation centers, nursing homes, and other health facilities employed 3 out of 10; and government agencies at the Federal, State, and local levels employed one-sixth. The Department of Veterans Affairs, the Department of Defense, and the Public Health Service employ the overwhelming majority of psychologists working for Federal agencies. Governments employ psychologists in hospitals, clinics, correctional facilities, and other settings. Psychologists also work in social service organizations, research organizations, management consulting firms, marketing research firms, and other businesses.

After several years of experience, some psychologists—usually those with doctoral degrees—enter private practice or set up their own research or consulting firms. A growing proportion of psychologists are self-employed.

Besides the jobs described above, many persons held positions as psychology faculty at colleges and universities, and as high school psychology teachers. (See the statements on college and university faculty and kindergarten, elementary, and secondary school teachers elsewhere in the *Handbook*.)

Training, Other Qualifications, and Advancement

A doctoral degree generally is required for employment as a psychologist. Psychologists with a Ph.D qualify for a wide range of teaching, research, clinical, and counseling positions in universities, elementary and secondary schools, private industry, and government. Psychologists with a Psy.D.—Doctor of Psychology—qualify mainly for clinical positions.

Persons with a master's degree in psychology can administer tests as psychological assistants. Under the supervision of doctoral level psychologists, they can conduct research in laboratories, conduct psychological evaluations, counsel patients, or perform administrative duties. They may teach in high schools or 2-year colleges or work as school psychologists or counselors.

A bachelor's degree in psychology qualifies a person to assist psychologists and other professionals in community mental health centers, vocational rehabilitation offices, and correctional programs; to work as research or administrative assistants; and to take jobs as

trainees in government or business. However, without additional academic training, their advancement opportunities in psychology are severely limited.

In the Federal Government, candidates having at least 24 semester hours in psychology and one course in statistics qualify for entry level positions. Competition for these jobs is keen, however. Clinical psychologists generally must have completed the Ph.D. or Psy.D. requirements and have served an internship; vocational and guidance counselors usually need 2 years of graduate study in counseling and 1 year of counseling experience.

In most cases, 2 years of full-time graduate study are needed to earn a master's degree in psychology. Requirements usually include practical experience in an applied setting or a master's thesis based on a research project. A master's degree in school psychology requires about 2 years of course work and a 1-year internship.

Five to 7 years of graduate work usually are required for a doctoral degree. The Ph.D. degree culminates in a dissertation based on original research. Courses in quantitative research methods, which include the use of computers, are an integral part of graduate study and usually necessary to complete the dissertation. The Psy.D. usually is based on practical work and examinations rather than a dissertation. In clinical or counseling psychology, the requirements for the doctoral degree generally include a year or more of internship or supervised experience.

Competition for admission into most graduate programs is keen. Some universities require an undergraduate major in psychology. Others prefer only basic psychology with courses in the biological, physical, and social sciences, statistics, and mathematics.

Most colleges and universities offer a bachelor's degree program in psychology; several hundred offer a master's and/or a Ph.D. program. A relatively small number of professional schools of psychology—some affiliated with colleges or universities—offer the Psy.D. The American Psychological Association (APA) presently accredits doctoral training programs in clinical, counseling, and school psychology. The National Council for Accreditation of Teacher Education, with the assistance of the National Association of School Psychologists, also is involved in the accreditation of advanced degree programs in school psychology. APA also accredits institutions that provide internships for doctoral students in school, clinical, and counseling psychology.

Although financial aid is difficult to obtain, some universities award fellowships or scholarships or arrange for part-time employment. The Veterans Administration (VA) offers predoctoral traineeships to interns in VA hospitals, clinics, and related training agencies. The National Science Foundation, the Department of Health and Human Services, and many other organizations also provide grants to psychology departments to help fund student stipends.

Psychologists in independent practice or those who offer any type of patient care, including clinical, counseling, and school psychologists, must meet certification or licensing requirements. All States and the District of Columbia have such requirements. Licensing laws vary by State, but generally require a doctorate in psychology, completion of an approved internship, and 1 to 2 years of professional experience. In addition, most States require that applicants pass an examination. Most State boards administer a standardized test and, in many instances, additional oral or essay examinations. Very few States certify those with a master's degree as psychological assistants or associates. Some States require continuing education for license renewal.

Most States require that licensed or certified psychologists limit their practice to those areas in which they have developed professional competence through training and experience.

The American Board of Professional Psychology recognizes professional achievement by awarding diplomas primarily in clinical psychology, clinical neuropsychology, and counseling, forensic, industrial and organizational, and school psychology. Candidates need a doctorate in psychology, 5 years of experience, and professional endorsements; they also must pass an examination.

Even more so than in other occupations, aspiring psychologists who are interested in direct patient care must be emotionally stable, mature, and able to deal effectively with people. Sensitivity, compassion, and the ability to lead and inspire others are particularly important for clinical work and counseling. Research psychologists should be able to do detailed work independently and as part of a team. Verbal and writing skills are necessary to communicate treatment and research findings. Patience and perseverance are vital qualities because results from psychological treatment of patients or research often are long in coming.

Job Outlook

Employment of psychologists is expected to grow much faster than the average for all occupations through the year 2005. Largely because of the substantial investment in training required to enter this specialized field, psychologists have a strong attachment to their occupation—only a relatively small proportion leave the profession each year. Nevertheless, replacement needs are expected to account for most job openings, similar to most occupations.

Programs to combat the increase in alcohol abuse, drug dependency, marital strife, family violence, crime, and other problems plaguing society should stimulate employment growth. Other factors spurring demand for psychologists include increased emphasis on mental health maintenance in conjunction with the treatment of physical illness; public concern for the development of human resources, including the growing elderly population; increased testing and counseling of children; and more interest in rehabilitation of prisoners. Changes in the level of government funding for these kinds of services could affect the demand for psychologists.

Job opportunities in health care should remain strong—particularly in health care provider networks, such as health maintenance and preferred provider organizations, that specialize in mental health, and in nursing homes and alcohol and drug abuse rehabilitation programs. Job opportunities will arise in businesses, nonprofit organizations, and research and computer firms. Companies will use psychologists' expertise in survey design, analysis, and research to provide personnel testing, program evaluation, and statistical analysis. The increase in employee assistance programs—in which psychologists help people stop smoking, control weight, or alter other behaviors—also should spur job growth. The expected wave of retirements among college faculty, beginning in the late 1990's, should result in job openings for psychologists in colleges and universities.

Other openings are likely to occur as psychologists study the effectiveness of changes in health, education, military, law enforcement, and consumer protection programs. Psychologists also are increasingly studying the effects on people of technological advances in areas such as agriculture, energy, the conservation and use of natural resources, and industrial and office automation.

Opportunities are best for candidates with a doctoral degree. Persons holding doctorates from leading universities in applied areas such as school, clinical, counseling, health, industrial, and educational psychology should have particularly good prospects. Psychologists with extensive training in quantitative research methods and computer science may have a competitive edge over applicants without this background.

Graduates with a master's degree in psychology may encounter competition for the limited number of jobs for which they qualify. Graduates of master's degree programs in school psychology should have the best job prospects, as schools are expected to increase student counseling and mental health services. Some master's degree holders may find jobs as psychological assistants in community mental health centers—these positions often require direct supervision by a licensed psychologist. Others may find jobs involving research and data collection and analysis in universities, government, or private companies.

Bachelor's degree holders can expect very few opportunities directly related to psychology. Some may find jobs as assistants in rehabilitation centers or in other jobs involving data collection and analysis. Those who meet State certification requirements may become high school psychology teachers.

Earnings

According to a 1991 survey by the American Psychological Association, the median annual salary of psychologists with a doctoral degree was $48,000 in counseling psychology; $50,000 in research positions; $53,000 in clinical psychology; $55,000 in school psychology; and $76,000 in industrial/organizational psychology.

In university psychology departments, median annual salaries ranged from $32,000 for assistant professors to $55,000 for full professors. The median annual salary of master's degree holders was $35,000 for faculty; $37,000 in counseling psychology; $40,000 in clinical psychology; $48,000 in research positions; $50,000 in industrial/organizational psychology; and $52,000 in school psychology. Some psychologists have much higher earnings, particularly those in private practice.

The Federal Government recognizes education and experience in certifying applicants for entry level positions. In general, the average starting salary for psychologists having a bachelor's degree was about $18,300 a year in 1993; those with superior academic records could begin at $22,700. Counseling and school psychologists with a master's degree and 1 year of counseling experience could start at $27,800. Clinical psychologists having a Ph.D. or Psy.D. degree and 1 year of internship could start at $33,600; some individuals could start at $40,300. The average salary for psychologists in the Federal Government in nonsupervisory, supervisory, and managerial positions was about $54,400 a year in 1993.

Related Occupations

Psychologists are trained to conduct research and teach, evaluate, counsel, and advise individuals and groups with special needs. Others who do this kind of work include psychiatrists, social workers, sociologists, clergy, special education teachers, and counselors.

Sources of Additional Information

For information on careers, educational requirements, financial assistance, and licensing in all fields of psychology, contact:

☞ American Psychological Association, Education in Psychology and Accreditation Offices, Education Directorate, 750 1st St. NE., Washington, DC 20002.

For information on careers, educational requirements, and licensing of school psychologists, contact:

☞ National Association of School Psychologists, 8455 Colesville Rd., Suite 1000, Silver Spring, MD 20910.

Information about State licensing requirements is available from:

☞ Association of State and Provincial Psychology Boards, P.O. Box 4389, Montgomery, AL 36103.

Information on traineeships and fellowships also is available from colleges and universities that have graduate departments of psychology.

Sociologists

(D.O.T. 054)

Nature of the Work

Sociologists study human society and social behavior by examining the groups and social institutions that people form—families, communities, and governments, as well as various social, religious, political, and business organizations. They also study the behavior and interaction of groups, trace their origin and growth, and analyze the influence of group activities on individual members. They are concerned with the characteristics of social groups, organizations, and institutions; the ways individuals are affected by each other and by the groups to which they belong, and the impact of social traits such as gender, age, or race on a person's daily life.

As a rule, sociologists work in one or more specialties, such as social organization, stratification, and mobility; revolution, war, and peace; racial and ethnic relations; education; family; social psychology; urban, rural, political, and comparative sociology; gender roles and relations; and sociological practice.

Other specialties include medical sociology—the study of social factors that affect mental and public health; gerontology—the study of aging and the special problems of aged persons; environmental sociology—the study of the effects of the physical environment and technology on people; clinical sociology—therapy, analysis, and intervention for individuals, groups, organizations, and communities; demography—the study of the size, characteristics, and movement of populations; criminology—the study of factors producing deviance from accepted legal and cultural norms; and industrial sociology—the study of work and organizations.

Other sociologists specialize in research design and data analysis. Sociologists usually conduct surveys or engage in direct observation to gather data. For example, after providing for controlled conditions, an organizational sociologist might test the effects of different styles of leadership on individuals in a small work group. A medical sociologist might study the effects of terminal illness on family interaction. Sociological researchers also evaluate the efficacy of different kinds of social programs. They might examine and evaluate particular programs of income assistance, job training, health care, or remedial education. Sociologists extensively use statistical and computer techniques in their research, along with qualitative methods such as focus group research and social impact assessment.

The results of sociological research aid educators, lawmakers, administrators, and others interested in resolving social problems and formulating public policy. For example, sociologists study issues related to abortion rights, AIDS, high school dropouts, homelessness, and latch-key children. Sociologists often work closely with community groups and members of other professions, including psychologists, physicians, economists, statisticians, urban and regional planners, political scientists, anthropologists, law enforcement and criminal justice officials, and social workers.

Some sociologists are primarily administrators. They apply their professional knowledge in areas as diverse as intergroup relations, family counseling, public opinion analysis, law enforcement, education, personnel administration, public relations, regional and community planning, and health services planning. They may, for example, administer social service programs in family and child welfare agencies, or develop social policies and programs for government, community, youth, or religious organizations.

A number of sociologists are employed as consultants. Using their expertise and research skills, they advise on such diverse problems as halfway houses and foster care for the mentally ill; counseling prisoners and ex-offenders; mediating labor-management disputes; or improving efficiency and flexibility in large corporations. Sociologists in business may consult with management to solve a wide range of problems and improve productivity and profitability. Sociologists can help companies plan for the future, deal with organizational restructuring and downsizing, and conduct market research for advertisers and manufacturers. Increasingly, sociologists are involved in the evaluation of social and welfare programs.

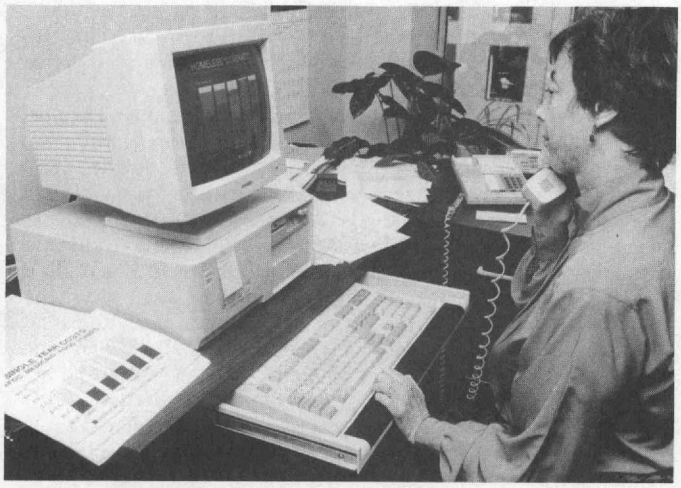
Sociologists often are confused with social workers, and in fact they do contribute to one another's discipline. While most sociologists conduct research on organizations, groups, and individuals, clinical sociologists, like social workers, may directly help people who are unable to cope with their circumstances. (See the statement on social workers elsewhere in the *Handbook*.)

Working Conditions

Most sociologists read, conduct research, and write reports, articles, and books. Sociologists working in government organizations, private firms, and nonprofit agencies generally have structured work schedules, and many experience the pressures of deadlines, tight schedules, heavy workloads, and overtime. They devote their time to research and the application of sociological knowledge and skills to solve organizational, community, and family problems. They often work as an integral part of a team. Some sociologists create their own private consulting firms and may work evenings or weekends to accommodate clients or complete a project. Travel may be required to collect data for research projects or to attend professional conferences.

Sociology faculty have more flexible work schedules, dividing their time between teaching, research, consulting, and administrative responsibilities. (See the statement on college and university faculty elsewhere in the *Handbook*.)

All sociologists engage in analyzing ideas and data on how society works. Mental efforts can be tiring and stressful.



Training in quantitative research methods is important for sociologists.

Employment

Outside of academia, where most sociologists are employed, sociologists held several thousand jobs in 1992. Some of these jobs were with government agencies, which employ sociologists to deal with such subjects as poverty, crime, public assistance, population growth, education, social rehabilitation, community development, mental health, racial and ethnic relations, drug abuse, school droputs, and environmental impact studies. Sociologists in the Federal Government work primarily for the Departments of Health and Human Services, Agriculture, Education, Commerce (Bureau of the Census), Defense, and the General Accounting Office. The also may work in special government agencies such as the Peace Corps, National Institute of Health, and the National Institute of Aging. Those specializing in demography, international development, or health may work for international organizations such as the World Bank, the United Nations, and the World Health Organization. Sociologists specializing in criminology work primarily for law enforcement agencies in State and local government.

Sociologists also hold managerial, research, personnel, and planning positions in research firms, consulting firms, educational institutions, corporations, professional and trade associations, hospitals, and welfare or other nonprofit organizations. Some sociologists have private practices in counseling, research, or consulting.

Most sociologists hold positions as sociology faculty in colleges and universities, or as high school sociology teachers. (See the statements on college and university faculty and kindergarten, elementary, and secondary school teachers elsewhere in the *Handbook*.)

Training, Other Qualifications, and Advancement

A master's degree in sociology usually is the minimum requirement for employment in applied research or community college teaching. The Ph.D. degree is essential for most senior level positions in research institutes, consulting firms, corporations, and government agencies, and is required for appointment to permanent teaching and research positions in colleges and universities.

Sociologists holding a master's degree can qualify for administrative and research positions in public agencies and private businesses. Training in research, statistical, and computer methods is an advantage in obtaining such positions.

Bachelor's degree holders in sociology often get jobs in related fields. Their training in research, statistics, and human behavior qualifies them for entry level positions in social services, management, sales, personnel, and marketing. Many work in social service agencies as counselors or child-care, juvenile, or recreation workers. Others are employed as interviewers or as administrative or research assistants. Sociology majors with sufficient training in statistical and survey methods may qualify for positions as junior analysts or statisticians in business or research firms or government agencies. Regardless of a sociologist's level of educational attainment, completion of an internship while in school can prove invaluable in finding a position in sociology or a related field.

In the Federal Government, candidates generally need a college degree with 24 semester hours in sociology, including course work in theory and methods of social research. However, since competition for the limited number of positions is keen, advanced study in the field is highly recommended.

In 1992 about 190 colleges and universities offered doctoral degree programs in sociology; most of these also offer a master's degree. The master's is the highest degree offered in over 150 schools; another approximately 860 schools have bachelor's degree programs.

Most colleges have core requirements for sociology degrees, including courses in statistics, research methodology, and sociological theory. Other courses cover a wide range of topics such as aging (gerontology), criminal justice, delinquency, deviance and social control, family and society, gender roles, social psychology, rural sociology, organizational behavior and analysis, mental health, and science and technology. Some institutions offer courses in peace and war, conflict resolution, or world systems theory. Many offer studies focused on sociological analysis of such areas of Latin America, Eastern Europe, the Middle East, or Asia. Programs also may include internships or field experiences.

Some departments of sociology have highly structured programs, while others are relatively unstructured and leave most course selection up to the individual student. Departments have different requirements regarding foreign language skills and completion of a thesis or dissertation for the master's and doctoral degrees.

The choice of a graduate school is important. Students should select a school that has adequate research facilities and course offerings in their areas of interest. Opportunities to gain practical experience also may be available, and sociology departments may help place students in teaching or research assistantships, business or research firms, or government agencies.

Certification by the Sociological Practice Association (SPA) is required for some positions in clinical sociology and applied sociology, especially at the doctoral level. Candidates for certification must have at least one year of relevant experience, an advanced degree from an accredited school, and demonstrate competence at SPA-sponsored workshops and conferences.

Intellectual curiosity is an essential trait for sociologists; researchers must have an inquiring mind and a desire to find explanations for the phenomena they observe. They must have an open mind to new ideas and unfamiliar social patterns. Like other social scientists, sociologists must be objective in gathering information about social institutions and behavior and need keen analytical skills in order to organize data effectively and reach valid conclusions. They must get along well with people, especially in research, teaching, or intervention situations, and should have good oral and writing skills.

Job Outlook

Most job openings in sociology are expected to result from the need to replace sociologists who transfer to other occupations, retire, or leave the labor force for other reasons. Additional positions for sociologists will stem from the increasing demand for research in various fields such as demography, criminology, gerontology, and medical sociology, and the need to evaluate and administer programs designed to cope with social and welfare problems. Growing recognition of the research and statistical skills of sociologists and the role they can play in solving a wide range of problems in business and industry may spur more job growth.

Opportunities in academia should be best for sociologists with a doctoral degree. The expected wave of retirements among college faculty, beginning in the late 1990's, should result in job openings for sociologists in colleges and universities. Those with master's degrees may find positions in community colleges.

Sociologists interested in practice (applied and clinical) settings will find that positions outside of academia are rapidly expanding. Some Ph.D.'s may take research and administrative positions in government, research organizations, and business firms. Those well-trained in quantitative research methods—including survey techniques, advanced statistics, and computer science—will have the

widest choice of jobs. For example, private firms that contract with the government to evaluate social programs and conduct other research increasingly seek sociologists with strong quantitative skills.

Demand is expected to be stronger for sociologists with training in practical rather than theoretical sociology. Such practical areas include clinical sociology, criminology, environmental sociology, medical sociology, gerontology, evaluation research, and demography. For example, the growing need for family counseling and drug and alcohol abuse prevention and therapy should spur demand for clinical sociologists. Additional demographers may be sought to help businesses plan marketing and advertising programs and to help developing countries analyze censuses, prepare population projections, and formulate long-range public planning programs. Gerontologists may be needed to help formulate programs for our expanding elderly population.

Persons with a master's degree face keen competition for academic positions, but the master's is the most marketable degree for entering sociological practice. Opportunities for employment exist in government agencies, industry or business, and research firms. They may obtain positions doing market research, policy building, administration, or quantitative research. Often the title of "sociologist" is not used—but program analysts, social science researchers, trainers, and maketing specialists are often titles appropriate for master's level sociology graduates.

Bachelor's degree holders will find their degree provides a solid basis for further study or for entry level employment in a broad range of fields—media, public relations, corrections, social welfare, community activism, and even business. As in the past, these graduates will compete with other liberal arts graduates for positions as trainees and assistants in business, industry, and government. Some may find positions in social welfare agencies. For those planning careers in law, journalism, business, social work, recreation, counseling, and other related disciplines, sociology provides an excellent background. Those who meet State certification requirements may become high school sociology teachers.

Earnings

Earnings vary with work settings. Experienced sociologists with a doctoral degree tend to earn the highest salaries in academia. Those employed in business, industry, and private consulting may earn more than those in academia or in government. The master's degree may be as lucrative as a doctorate in some settings outside of academia.

The Federal Government recognizes education and experience in certifying applicants for entry level positions. In general, the average entrance salary for sociologists with a bachelor's degree was about $18,300 or $22,700 a year in 1993, depending upon the applicant's academic record. The starting salary for those with a master's degree was $27,800 a year, and for those with a Ph.D., $33,600, while some individuals with experience and an advanced degree could start at $40,300. The average annual salary for all sociologists in the Federal Government in nonsupervisory, supervisory, and managerial positions was around $53,300 a year in 1993.

In general, sociologists with the Ph.D. degree earn substantially higher salaries than those with a lesser degree. Some sociologists supplement their regular salaries with earnings from other sources, such as consulting, counseling, or writing articles and books. Those who create their own consulting practice find that earnings vary according to how much time they devote to their practice, the type of clients they serve, and the region of the country.

Related Occupations

Sociologists are not the only people whose jobs require an understanding of social processes and institutions. Others whose work demands such expertise include anthropologists, economists, geographers, historians, political scientists, psychologists, urban and regional planners, reporters and correspondents, social workers, and intelligence specialists.

Sources of Additional Information

Additional information on careers, certification, and graduate departments of sociology is available from:

☞ American Sociological Association, 1722 N St. NW., Washington, DC 20036-2981.

For information about careers in demography, contact:

☞ Population Association of America, 1722 N St. NW., Washington, DC 20036.

For information about careers and certification in clinical and applied sociology, contact:

☞ Sociological Practice Association, Department of Pediatrics/Human Development, B240 Life Sciences, Michigan State University, East Lansing, MI 48824-1317.

For information about careers in rural sociology, contact:

☞ Rural Sociology Society, Department of Sociology, Montana State University, Bozeman, MT 59715.

Urban and Regional Planners

(D.O.T. 188.167-110 and 199.167-014)

Nature of the Work

Urban and regional planners, often called community or city planners, develop programs to provide for growth and revitalization of urban, suburban, and rural communities and their regions. Planners help local officials make decisions on social, economic, and environmental problems.

Planners usually devise plans outlining the best use of a community's land—where residential, commercial, recreational, and other human services should take place. Planners also are involved in various other planning activities, including social services, transportation, and resource development. They address such issues as central city redevelopment, traffic congestion, air pollution, and the impact of growth and change on an area. They formulate capital improvement plans to construct new school buildings, public housing, and sewage systems. Planners are involved in environmental issues including pollution control, wetland preservation, and landfills. Planners also help find solutions to social issues such as the needs of an aging population, sheltering the homeless, and meeting the demand for drug and alcohol treatment centers, correctional facilities, and abortion and AIDS patient clinics.

Planners examine community facilities such as health clinics and schools to be sure these facilities can meet the demands placed upon them, and help resolve differences over their location. They keep abreast of the economic and legal issues involved in community development or redevelopment and changes in zoning codes, building codes, or environmental regulations. They ensure that builders and developers follow these codes and regulations. Planners also deal with land use and environmental issues created by population movements. For example, as suburban growth has increased the need for traveling between suburbs and the urban center, the planner's job often includes designing new transportation systems and parking facilities. In conjunction with these new systems and facilities, planners also may develop transportation management plans designed to control traffic, not just accommodate it. For example, developers may be required to provide public transportation facilities, or cities may be required to set up van pool transportation systems.

Urban and regional planners prepare for situations that are likely to develop as a result of population growth or social and economic change. They estimate, for example, the community's long-range needs for housing, transportation, and business and industrial sites. Working within a framework set by the community government, they analyze and propose alternative ways to achieve more efficient and attractive urban areas.

Before preparing plans for long-range community development, urban and regional planners prepare detailed studies that show the current use of land for residential, business, and community purposes. These reports include such information as the location of streets, highways, water and sewer lines, schools, libraries, and cultural and recreational sites. They also provide information on the types of industries in the community, characteristics of the population, and employment and economic trends. With this information, along with input from citizens' advisory committees, urban and regional planners propose ways of using undeveloped or underutilized

land and design the layout of recommended buildings and other facilities such as subway lines and stations. They also prepare materials that show how their programs can be carried out and what they will cost.

As in many other fields, planners increasingly use computers to record and analyze information and to communicate their findings and recommendations to government leaders and others. For example, computers are widely used to determine program costs, map land areas, and forecast future trends in employment, housing, transportation, or population. Computerized geographic information systems enable planners to overlay maps depicting different geographic variables, and to combine and manipulate the data to produce alternative plans for land use or development.

Urban and regional planners often confer with land developers, civic leaders, and other public planning officials. They may function as mediators in community disputes by presenting alternatives that are acceptable to opposing parties. Planners may prepare materials for community relations programs, speak at civic meetings, and appear before legislative committees to explain their proposals.

In large organizations, planners usually specialize in areas such as physical design, transportation, housing supply and demand, community relations, historic preservation, environmental and regulatory issues, or economic development. In small organizations, planners must be generalists, able to do various kinds of planning.

Working Conditions

Urban and regional planners spend a great deal of their time in offices. To be familiar with areas that they are developing, however, they periodically spend time outdoors examining the features of the land under consideration for development, its current use, and the types of structures on it. Although most planners have a scheduled 40-hour workweek, they frequently attend evening or weekend meetings or public hearings with citizens' groups. Planners may experience the pressure of deadlines and tight work schedules, as well as opposition from interest groups affected by their land use proposals.

Employment

Urban and regional planners held about 28,000 jobs in 1992. Local government planning agencies—city, county, or regional—employed 2 out of 3. An increasing proportion of public agency planners work in smaller suburban jurisdictions—reflecting population movements in recent years. Others are employed in State agencies that deal with housing, transportation, or environmental protection. Federal employers include the Departments of Defense, Housing and Urban Development, and Transportation.

Many planners do consulting work, either part time in addition to a regular job, or full time for a firm that provides services to private developers or government agencies. Private sector employers include architectural and surveying firms, management and public relations firms, educational institutions, large land developers, and law firms specializing in land use.

Urban and regional planners deal with land use and environmental issues created by population movements.

Training, Other Qualifications, and Advancement

Employers usually prefer workers who have advanced training in urban or regional planning. Most entry level jobs in Federal, State, and local government agencies require 2 years of graduate study in urban or regional planning, or the equivalent in work experience. A bachelor's degree from an accredited planning program, coupled with a master's degree in landscape architecture or civil engineering, for example, also is good preparation for entry level planning jobs. A master's degree from an accredited planning program provides the best training. Although graduates having an accredited bachelor's degree in planning qualify for many beginning positions, their advancement opportunities may be limited. Courses in related disciplines such as demography, economics, finance, health administration, and management are highly recommended. In addition, familiarity with computer models and statistical techniques is critical because of the increasing use of computerized modeling and geographic information systems in urban and regional planning analyses.

In 1992, about 80 colleges and universities offered an accredited master's and about 10 offered an accredited bachelor's degree program in urban or regional planning. These programs are accredited by the Planning Accreditation Board, which consists of representatives of the American Institute of Certified Planners and the Association of Collegiate Schools of Planning. Most graduate programs in planning require 2 years. Graduate students spend considerable time in studios, workshops, or laboratory courses learning to analyze and solve urban and regional planning problems and often are required to work in a planning office part time or during the summer. Local government planning offices offer students internships that provide experience that often proves invaluable in obtaining a full-time planning position after graduation.

The American Institute of Certified Planners (AICP), a professional institute within the American Planning Association (APA), grants certification to individuals who have the appropriate combination of education and professional experience and who pass an examination. Data on AICP membership indicate that certified planners tend to hold the more responsible, better paying positions in their field.

Planners must be able to think in terms of spatial relationships and visualize the effects of their plans and designs. Planners should be flexible and able to reconcile different viewpoints to make constructive policy recommendations. The ability to communicate effectively, both orally and in writing, also is necessary for anyone interested in this field.

After a few years' experience, urban and regional planners may advance to assignments requiring a high degree of independent judgment such as designing the physical layout of a large development or recommending policy, program, and budget options. Some are promoted to jobs as planning directors and spend a great deal of time meeting with officials in other organizations, speaking to civic groups, and supervising other professionals. Further advancement occurs through a transfer to a large city with more complex problems and greater responsibilities, or into related occupations, such as director of community or economic development.

Job Outlook

A master's degree from an accredited planning program, or a master's degree in civil engineering or landscape architecture coupled with training in transportation or environmental planning, provide the most marketable background. Certified planners have the best job prospects. Graduates with only an accredited bachelor's degree in planning may have more difficulty finding a job in this field, but their employment prospects still are relatively good.

Employment of urban and regional planners is expected to grow about as fast as the average for all occupations through the year 2005. Most job openings, however, are likely to arise from the need

to replace experienced planners who transfer to other occupations, or retire or leave the labor force for other reasons.

The continuing importance of transportation, environmental, housing, economic, and energy production planning will spur demand for urban and regional planners. Specific factors contributing to job growth include commercial development to support suburban areas with rapidly growing populations; legislation related to the environment, transportation, housing, and land use and development, such as the Clean Air Act; historic preservation and rehabilitation activities; central city redevelopment; the need to replace the Nation's infrastructure, including bridges, highways, and sewers; and interest in zoning and land use planning in undeveloped and nonmetropolitan areas, including coastal and agricultural areas.

Most new jobs for urban and regional planners will arise in rapidly expanding communities. Local governments need planners to address an array of problems associated with population growth. For example, new housing developments require roads, sewer systems, fire stations, schools, libraries, and recreation facilities that must be planned while considering budgetary constraints. Job growth also is expected to occur in smaller cities and towns in established areas—for example, in the Northeast—undergoing preservation and redevelopment, and in tourist resorts. Changes in the level of government funding for planning services could greatly affect demand for these workers.

Earnings

Salaries of planners vary by educational attainment, type of employer, experience, size of community in which they work, and geographic location. According to a 1991 survey by APA, urban and regional planners earned a median annual salary of $42,000. Planners with a Ph.D. in planning earned a median salary of $57,000; those with a master's degree earned $43,000; and bachelor's degree holders earned $39,200.

The median annual salary of planners in city governments was $40,100; in county governments, $38,000; in joint city/county governments, $36,000; and in State governments, $43,000; Planners in land development firms earned $65,500; in colleges and universities, $51,900; in private consulting firms, $49,000; and in nonprofit foundations, $42,000. For planners with over 10 years' experience, local government agencies paid $47,700 annually, while private businesses and consulting firms paid $58,000. Directors of public planning agencies within local governments earned 13 percent more than staff members at comparable levels of experience, while directors or chief executive officers of private consulting firms earned only 7 percent more than staff members. Salaries of planners in large jurisdictions may be as much as $6,000 a year higher than their counterparts in small jurisdictions.

Planners with a master's degree were hired by the Federal Government at a starting average salary of $27,800 a year in 1993. In some cases, persons having less than 2 years of graduate work could enter Federal service as interns at yearly salaries of about $18,300 or $22,700. Salaries of urban and regional planners employed by the Federal Government in nonsupervisory, supervisory, and managerial positions averaged about $52,400 a year in 1993.

Related Occupations

Urban and regional planners develop plans for the orderly growth of urban and rural communities. Others whose work is similar to the work of planners include architects, landscape architects, city managers, civil engineers, environmental engineers, and geographers.

Sources of Additional Information

Additional information on careers, salaries, and certification in urban and regional planning, as well as job referrals, are available from:

☞ American Planning Association, 1776 Massachusetts Ave. NW., Washington, DC 20036.

General information on urban and regional planning, and on schools offering training in urban and regional planning prepared by the Association of Collegiate Schools of Planning is available from:

☞ American Planning Association, Planners' Bookstore, 1313 East 60th St., Chicago, IL 60637.

Lawyers and Judges

(D.O.T. 110; 111; 119.107, .117, .167-010, .267-014; 169.267-010)

Nature of the Work

Lawyers. Lawyers, also called attorneys, act as both advocates and advisors in our society. As advocates, they represent one of the opposing parties in criminal and civil trials by presenting evidence that support their client in court. As advisors, lawyers counsel their clients as to their legal rights and obligations and suggest particular courses of action in business and personal matters. Whether acting as advocates or advisors, all attorneys interpret the law and apply it to specific situations. This requires research and communication abilities.

Lawyers perform in-depth research into the purposes behind the applicable laws and into judicial decisions that have been applied to those laws under circumstances similar to those currently faced by the client. While all lawyers continue to make use of law libraries to prepare cases, some supplement their search of the conventional printed sources with computer software packages that automatically search the legal literature and identify legal texts that may be relevant to a specific subject. In litigation that involves many supporting documents, lawyers may also use computers to organize and index the material. Tax lawyers are also increasingly using computers to make tax computations and explore alternative tax strategies for clients.

Lawyers then communicate to others the information obtained by research. They advise what actions clients may take and draw up legal documents, such as wills and contracts, for clients. Lawyers must deal with people in a courteous, efficient manner and not disclose matters discussed in confidence with clients. They hold positions of great responsibility, and are obligated to adhere to strict rules of ethics.

The more detailed aspects of a lawyer's job depend upon his or her field of specialization and position. Even though all lawyers are allowed to represent parties in court, some appear in court more frequently than others. Some lawyers specialize in trial work. These lawyers need an exceptional ability to think quickly and speak with ease and authority, and must be thoroughly familiar with courtroom rules and strategy. Trial lawyers still spend most of their time outside the courtroom conducting research, interviewing clients and witnesses, and handling other details in preparation for trial.

Besides trials, lawyers may specialize in other areas, such as bankruptcy, probate, or international law. Environmental lawyers, for example, may represent public interest groups, waste disposal companies, or construction firms in their dealings with the Environmental Protection Agency (EPA) and other State and Federal agencies. They help clients prepare and file for licenses and applications for approval before certain activities can occur. They also represent clients' interests in administrative adjudications and during drafting of new regulations.

Some lawyers concentrate in the emerging field of intellectual property. These lawyers help protect clients' claims to copyrights, art work under contract, product designs, and computer programs. Still other lawyers advise insurance companies about the legality of insurance transactions. They write insurance policies to conform with the law and to protect companies from unwarranted claims. They review claims filed against insurance companies and represent the companies in court.

The majority of lawyers are in private practice where they may concentrate on criminal or civil law. In criminal law, lawyers represent persons who have been charged with crimes and argue their cases in courts of law. In civil law, attorneys assist clients with litigation, wills, trusts, contracts, mortgages, titles, and leases. Some manage a person's property as trustee or, as executor, see that provisions of a client's will are carried out. Others handle only public interest cases—civil or criminal—which have a potential impact extending well beyond the individual client.

Lawyers sometimes are employed full time by a single client. If the client is a corporation, the lawyer is known as "house counsel" and usually advises the company about legal questions that arise

from its business activities. These questions might involve patents, government regulations, contracts with other companies, property interests, or collective bargaining agreements with unions.

Attorneys employed at the various levels of government make up still another category. Lawyers that work for State attorneys general, prosecutors, public defenders, and courts play a key role in the criminal justice system. At the Federal level, attorneys investigate cases for the Department of Justice or other agencies. Also, lawyers at every government level help develop programs, draft laws, interpret legislation, establish enforcement procedures, and argue civil and criminal cases on behalf of the government.

Other lawyers work for legal aid societies—private, nonprofit organizations established to serve disadvantaged people. These lawyers generally handle civil rather than criminal cases.

A relatively small number of trained attorneys work in law schools. Most are faculty members who specialize in one or more subjects, and others serve as administrators. Some work full time in nonacademic settings and teach part time. (For additional information, see the statement on college and university faculty elsewhere in the *Handbook*.) Some lawyers become judges, although not all judges have practiced law.

Judges. Judges apply the law. They oversee the legal process that in courts of law resolves civil disputes and determines guilt in criminal cases according to Federal and State laws and those of local jurisdictions. They preside over cases touching on virtually every aspect of society, from traffic offenses to disputes over management of professional sports, from the rights of huge corporations to questions of disconnecting life support equipment for terminally ill persons. They must insure that trials and hearings are conducted fairly and that the court administers justice in a manner that safeguards the legal rights of all parties involved.

Judges preside over trials or hearings and listen as attorneys representing the parties present and argue their cases. They rule on the admissibility of evidence and methods of conducting testimony, and settle disputes between the opposing attorneys. They insure that rules and procedures are followed, and if unusual circumstances arise for which standard procedures have not been established, judges direct how the trial will proceed based on their knowledge of the law.

Judges often hold pretrial hearings for cases. They listen to allegations and, based on the evidence presented, determine whether they have enough merit for a trial to be held. In criminal cases, judges may decide that persons charged with crimes should be held in jail pending their trial, or may set conditions for release through the trial. In civil cases, judges may impose restrictions upon the parties until a trial is held.

When trials are held, juries are often selected to decide cases. However, judges decide cases when the law does not require a jury trial, or when the parties waive their right to a jury. Judges instruct juries on applicable laws, direct them to deduce the facts from the evidence presented, and hear their verdict. Judges sentence those convicted in criminal cases in many States. They also award relief to litigants including, where appropriate, compensation for damages in civil cases.

Judges also work outside the courtroom "in chambers." In their private offices, judges read documents on pleadings and motions, research legal issues, hold hearings with lawyers, write opinions, and oversee the court's operations. Running a court is like running a small business, and judges manage their courts' administrative and clerical staff, too.

Judges' duties vary according to the extent of their jurisdictions and powers. *General trial court judges* of the Federal and State court systems have jurisdiction over any case in their system. They generally try civil cases that transcend the jurisdiction of lower courts, and all cases involving felony offenses. Federal and State *appellate court judges*, although few in number, have the power to overrule decisions made by trial court or administrative law judges if they determine that legal errors were made in a case, or if legal precedent does not support the judgement of the lower court. They rule on fewer cases and rarely have direct contacts with the people involved.

The majority of State court judges preside in courts in which jurisdiction is limited by law to certain types of cases. A variety of titles are assigned to these judges, but among the most common are *municipal court judge, county court judge, magistrate,* or *justice of the peace.* Traffic violations, misdemeanors, small claims cases, and pretrial hearings constitute the bulk of the work of these judges, but some States allow them to handle cases involving domestic relations, probate, contracts, and selected other areas of the law.

Administrative law judges, formerly called *hearing officers,* are employed by government agencies to rule on appeals of agency administrative decisions. They make decisions on a person's eligibility for various Social Security benefits or worker's compensation, protection of the environment, enforcement of health and safety regulations, employment discrimination, and compliance with economic regulatory requirements.

Working Conditions

Lawyers and judges do most of their work in offices, law libraries, and courtrooms. Lawyers sometimes meet in clients' homes or places of business and, when necessary, in hospitals or prisons. They frequently travel to attend meetings; to gather evidence; and to appear before courts, legislative bodies, and other authorities.

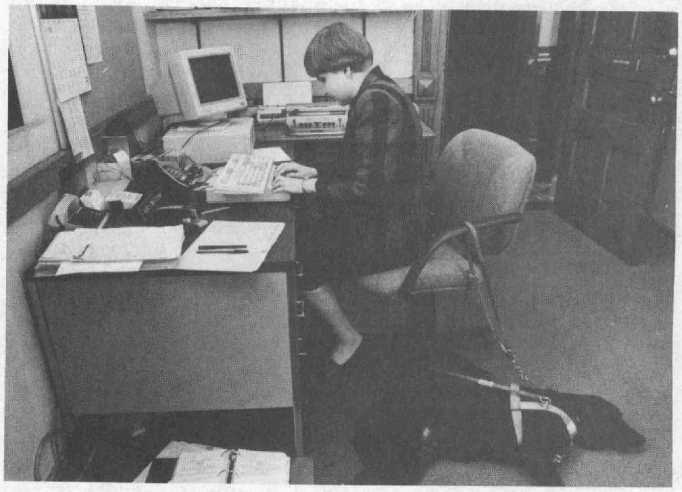
Salaried lawyers in government and private corporations generally have structured work schedules. Lawyers in private practice may work irregular hours while conducting research, conferring with clients, or preparing briefs during nonoffice hours. Lawyers often work long hours, and about half regularly work 50 hours or more per week. They are under particularly heavy pressure, for example, when a case is being tried. Preparation for court includes keeping abreast of the latest laws and judicial decisions.

Although work generally is not seasonal, the work of tax lawyers and other specialists may be an exception. Because lawyers in private practice can often determine their own workload and when they will retire, many stay in practice well beyond the usual retirement age.

Many judges work a standard 40-hour week, but a third of all judges work over 50 hours per week. Some judges with limited jurisdiction are employed part time and divide their time between their judicial responsibilities and other careers.

Employment

Lawyers and judges held about 716,000 jobs in 1992. About four-fifths of the 626,000 lawyers practiced privately, either in law firms or in solo practices. Most of the remaining lawyers held positions in government, the greatest number at the local level. In the Federal Government, lawyers are concentrated in the Departments of Justice, Treasury, and Defense, but they work for other Federal agencies as well. Other lawyers are employed as house counsel by public utilities, banks, insurance companies, real estate agencies, manufacturing firms, welfare and religious organizations, and other business firms and nonprofit organizations. Some salaried lawyers also have



Lawyers and judges do most of their work in offices, law libraries, and courtrooms.

part-time independent practices; others work as lawyers part time while working full time in another occupation.

Judges held 90,000 jobs in 1992. All worked for Federal, State, or local governments, with about half holding positions in the Federal Government. The majority of the remainder were employed at the State level.

Many people trained as lawyers are not employed as lawyers or judges; they work as law clerks, law school professors, managers and administrators, and in a variety of other occupations.

Training, Other Qualifications, and Advancement

Lawyers. To practice law in the courts of any State or other jurisdiction, a person must be licensed, or admitted to its bar, under rules established by the jurisdiction's highest court. Nearly all require that applicants for admission to the bar pass a written bar examination. Most jurisdictions also require applicants to pass a separate written ethics examination. Lawyers who have been admitted to the bar in one jurisdiction occasionally may be admitted to the bar in another without taking an examination if they meet that jurisdiction's standards of good moral character and have a specified period of legal experience. Federal courts and agencies set their own qualifications for those practicing before them.

To qualify for the bar examination in most States, an applicant must complete at least 3 years of college and graduate from a law school approved by the American Bar Association (ABA) or the proper State authorities. (ABA approval signifies that the law school—particularly its library and faculty—meets certain standards developed by the Association to promote quality legal education.) In 1992, the American Bar Association approved 177 law schools. Others were approved by State authorities only. With certain exceptions, graduates of schools not approved by the ABA are restricted to taking the bar examination and practicing in the State or other jurisdiction in which the school is located; most of these schools are in California. Seven States accept the study of law in a law office or in combination with study in a law school; only California accepts the study of law by correspondence as qualifying for taking the bar examination. Several States require registration and approval of students by the State Board of Law Examiners, either before they enter law school or during the early years of legal study.

Although there is no nationwide bar examination, 46 States, the District of Columbia, Guam, the Northern Mariana Islands, and the Virgin Islands require the 6-hour Multistate Bar Examination (MBE) as part of the bar examination; the MBE is not required in Indiana, Iowa, Louisiana, Washington, and Puerto Rico. The MBE, covering issues of broad interest, is given in addition to a locally prepared 6-hour State bar examination. The 3-hour Multistate Essay Examination (MEE) is used as part of the State bar examination in a few States. States vary in their use of MBE and MEE scores.

The required college and law school education usually takes 7 years of full-time study after high school—4 years of undergraduate study followed by 3 years in law school. Although some law schools accept a very small number of students after 3 years of college, most require applicants to have a bachelor's degree. To meet the needs of students who can attend only part time, a number of law schools have night or part-time divisions which usually require 4 years of study. In 1991, about one 1 of 6 students in ABA-approved schools were part time.

Preparation for a career as a lawyer really begins in college. Although there is no recommended "prelaw" major, the choice of an undergraduate program is important. Certain courses and activities are desirable because they give the student the skills needed to succeed both in law school and in the profession. Essential skills—proficiency in writing, reading and analyzing, thinking logically, and communicating verbally—are learned during high school and college. An undergraduate program that cultivates these skills while broadening the student's view of the world is desirable. Courses in English, a foreign language, public speaking, government, philosophy, history, economics, mathematics, and computer science, among others, are useful. Whatever the major, students should not specialize too narrowly.

Students interested in a particular aspect of law may find related courses helpful; for example, many law schools with patent law tracks require bachelor's degrees, or at least several courses, in engineering and science. Future tax lawyers should have a strong undergraduate background in accounting.

Acceptance by most law schools depends on the applicant's ability to demonstrate an aptitude for the study of law, usually through good undergraduate grades, the Law School Admission Test (LSAT), the quality of the applicant's undergraduate school, any prior work experience, and sometimes a personal interview. However, law schools vary in the weight that they place on each of these factors.

All law schools approved by the American Bar Association require that applicants take the LSAT. Nearly all law schools require that applicants have certified transcripts sent to the Law School Data Assembly Service. This service then sends applicants' LSAT scores and their standardized records of college grades to the law schools of their choice. Both this service and the LSAT are administered by the Law School Admission Services.

Competition for admission to many law schools is intense. Enrollments rose very rapidly during the 1970's, with applicants far outnumbering available seats. Since then, law school enrollments have remained relatively unchanged, and the number of applicants has fluctuated. However, the number of applicants to most law schools still greatly exceeds the number that can be admitted. Enrollments are expected to remain at about their present level through the year 2005, and competition for admission to the more prestigious law schools will remain keen.

During the first year or year and a half of law school, students generally study fundamental courses such as constitutional law, contracts, property law, torts, civil procedure, and legal writing. In the remaining time, they may elect specialized courses in fields such as tax, labor, or corporation law. Law students often acquire practical experience by participation in school sponsored legal aid or legal clinic activities, in the school's moot court competitions in which students conduct appellate arguments, in practice trials under the supervision of experienced lawyers and judges, and through research and writing on legal issues for the school's law journal.

In 1992, law students in 36 States and 2 other jurisdictions were required to pass the Multistate Professional Responsibility Examination (MPRE), which tests their knowledge of the ABA codes on professional responsibility and judicial conduct. In some States, the MPRE may be taken during law school, usually after completing a course on legal ethics.

A number of law schools have clinical programs where students gain legal experience through practice trials and law school projects under the supervision of practicing lawyers and law school faculty. Law school clinical programs might include work in legal aid clinics, for example, or on the staff of legislative committees. Part-time or summer clerkships in law firms, government agencies, and corporate legal departments also provide experience that can be extremely valuable later on. Such training can provide references or lead directly to a job after graduation, and can help students decide what kind of practice best suits them. Clerkships also may be an important source of financial aid.

Graduates receive the degree of *juris doctor* (J.D.) or *bachelor of law* (LL.B.) as the first professional degree. Advanced law degrees may be desirable for those planning to specialize, do research, or teach. Some law students pursue joint degree programs, which generally require an additional year. Joint degree programs are offered in a number of areas, including law and business administration and law and public administration.

After graduation, lawyers must keep informed about legal and nonlegal developments that affect their practice. Thirty-seven States and jurisdictions mandate Continuing Legal Education (CLE). Furthermore, many law schools and State and local bar associations provide continuing education courses that help lawyers stay abreast of recent developments.

The practice of law involves a great deal of responsibility. Persons planning careers in law should like to work with people and be able to win the respect and confidence of their clients, associates, and the public. Integrity and honesty are vital personal qualities. Perseverance and reasoning ability are essential to analyze complex cases and reach sound conclusions. Lawyers also need creativity when handling new and unique legal problems.

Most beginning lawyers start in salaried positions. Newly hired salaried attorneys usually act as research assistants to experienced lawyers or judges. After several years of progressively more responsible salaried employment, some lawyers are admitted to partnership in their firm, or go into practice for themselves. Some lawyers, after years of practice, become full-time law school faculty or administrators; a growing number have advanced degrees in other fields as well.

Some persons use their legal training in administrative or managerial positions in various departments of large corporations. A transfer from a corporation's legal department to another department often is viewed as a way to gain administrative experience and rise in the ranks of management.

Judges. Most judges, although not all, have been lawyers first. All Federal judges and State trial and appellate court judges are required to be lawyers or "learned in law." About 40 States presently allow nonlawyers to hold limited jurisdiction judgeships, but opportunities are better with law experience. Federal administrative law judges must be lawyers and pass a competitive examination administered by the U.S. Office of Personnel Management. Many State administrative law judges and other hearing officials are not required to be lawyers, but law degrees are preferred for most positions.

Federal judges are appointed for life by the President, with the consent of the Senate. Federal administrative law judges are appointed by the various Federal agencies with virtually lifetime tenure. About half of all State judges are appointed, while the remainder are elected in partisan or nonpartisan State elections. Most State and local judges serve fixed terms, which range from 4 or 6 years for most limited jurisdiction judgeships to as long as 14 years for some appellate court judges. Judicial nominating commissions, composed of members of the bar and the public, are used to screen candidates for judgeships in many States, as well as for Federal judgeships.

All States have some type of orientation for newly elected or appointed judges. Thirteen States also require judges to take continuing education courses while serving on the bench.

Job Outlook

Persons seeking positions as lawyers or judges should encounter keen competition through the year 2005. Law schools still attract large numbers of applicants and are not expected to decrease their enrollments, so the supply of persons trained as lawyers should continue to exceed job openings. As for judges, the prestige associated with serving on the bench should insure continued intense competition for openings.

Lawyers. Employment of lawyers has grown very rapidly since the early 1970's, and is expected to continue to grow faster than the average for all occupations through the year 2005. New jobs created by growth should exceed job openings that arise from the need to replace lawyers who stop working or leave the profession. The strong growth in demand for lawyers will result from growth in the population and the general level of business activities. Demand also will be spurred by growth of legal action in such areas as employee benefits, consumer protection, criminal prosecution, the environment, and finance, and an anticipated increase in the use of legal services by middle-income groups through legal clinics and prepaid legal service programs.

Even though jobs for lawyers are expected to increase rapidly, competition for job openings should continue to be keen because of the large numbers graduating from law school each year. During the 1970's, the annual number of law school graduates more than doubled, outpacing the rapid growth of jobs. Growth in the yearly number of law school graduates tapered off during the 1980's, but again increased in the early 1990's. The high number of graduates will strain the economy's capacity to absorb them. Although graduates with superior academic records from well-regarded law schools will continue to enjoy good opportunities, most graduates will encounter competition for jobs. As in the past, some graduates may have to accept positions in areas outside their field of interest or for which they feel they are overqualified. They may have to enter jobs for which legal training is an asset but not normally a requirement. For example, banks, insurance firms, real estate companies, government agencies, and other organizations seek law graduates to fill many administrative, managerial, and business positions.

Due to the competition for jobs, a law graduate's geographic mobility and work experience assume greater importance. The willingness to relocate may be an advantage in getting a job, but to be licensed in a new State, a lawyer may have to take an additional State bar examination. In addition, employers increasingly seek graduates who have advanced law degrees and experience in a particular field such as tax, patent, or admiralty law.

Employment growth of lawyers will continue to be concentrated in salaried jobs, as businesses and all levels of government employ a growing number of staff attorneys, and as employment in the legal services industry is increasingly concentrated in larger law firms. The number of self-employed lawyers is expected to continue to increase slowly, reflecting the difficulty of establishing a profitable new practice in the face of competition from larger, established law firms. Also, the growing complexity of law—which encourages specialization—and the cost of maintaining up-to-date legal research materials both favor larger firms.

For lawyers who nevertheless wish to work independently, establishing a new practice probably will continue to be easiest in small towns and expanding suburban areas, as long as an active market for legal services already exists. In such communities, competition from larger established law firms is likely to be less than in big cities, and new lawyers may find it easier to become known to potential clients; also, rent and other business costs are somewhat lower. Nevertheless, starting a new practice will remain an expensive and risky undertaking that should be weighed carefully. Most salaried positions will remain in urban areas where government agencies, law firms, and big corporations are concentrated.

Some lawyers are adversely affected by cyclical swings in the economy. During recessions, the demand for some discretionary legal services, such as planning estates, drafting wills, and handling real estate transactions, declines. Also, corporations are less likely to litigate cases when declining sales and profits result in budgetary restrictions. Although few lawyers actually lose their jobs during these times, earnings may decline for many. Some corporations and law firms will not hire new attorneys until business improves. Several factors, however, mitigate the overall impact of recessions on lawyers. During recessions, individuals and corporations face other legal problems, such as bankruptcies, foreclosures, and divorces, that require legal action. Furthermore, new laws and legal interpretations will create new opportunities for lawyers.

Judges. Employment of judges is expected to grow more slowly than the average for all occupations. Contradictory social forces affect the demand for judges. Pushing up demand are public concerns about crime, safety, and efficient administration of justice; on the other hand, tight public funding should slow job growth.

Competition for judgeships should remain keen. Most job openings will arise as judges retire. Traditionally, many judges have held their positions until late in life. Now, early retirement is becoming more common, creating more job openings; however, becoming a judge will still be difficult. Besides competing with other qualified people, judicial candidates must gain political support in order to be elected or appointed.

Earnings

Annual salaries of beginning lawyers in private industry averaged about $36,600 in 1992, but top graduates from the Nation's best law schools started in some cases at over $80,000 a year. In the Federal Government, annual starting salaries for attorneys in 1993 were about $27,800 or $33,600, depending upon academic and personal qualifications. Factors affecting the salaries offered to new graduates include: Academic record; type, size, and location of employer; and the specialized educational background desired. The field of law makes a difference, too. Patent lawyers, for example, generally are among the highest paid attorneys.

Salaries of experienced attorneys also vary widely according to the type, size, and location of their employer. The average salary of the most experienced lawyers in private industry in 1992 was over

$134,000, but some senior lawyers who were partners in the Nation's top law firms earned over $1 million. General attorneys in the Federal Government averaged around $62,200 a year in 1993; the relatively small number of patent attorneys in the Federal Government averaged around $71,600.

Lawyers on salary receive increases as they assume greater responsibility. Lawyers starting their own practice may need to work part time in other occupations during the first years to supplement their income. Their incomes usually grow as their practices develop. Lawyers who are partners in law firms generally earn more than those who practice alone.

Federal district court judges had salaries of $133,600 in 1993, as did judges in the Court of Federal Claims. Circuit court judges earned $141,700 a year. Federal judges with limited jurisdiction, such as magistrates and bankruptcy court judges, had salaries of $122,900 in 1993. Full-time Federal administrative law judges had average salaries of $94,800 in 1993. The Chief Justice of the United States Supreme Court earned $171,500 in 1993, and the Associate Justices earned $164,100.

Annual salaries of associate justices of States' highest courts averaged nearly $89,570 in 1992, according to a survey by the National Center for State Courts, and ranged from about $62,500 to $121,207. Salaries of State intermediate appellate court judges averaged $88,435, but ranged from $79,975 to $113,632. Salaries of State judges with limited jurisdiction varied widely; many salaries are set locally.

Most salaried lawyers and judges were provided health and life insurance, and contributions were made on their behalf to retirement plans. Lawyers who practiced independently were only covered if they arranged and paid for such benefits themselves.

Related Occupations

Legal training is useful in many other occupations. Some of these are paralegal, arbitrator, journalist, patent agent, title examiner, legislative assistant, lobbyist, FBI special agent, political office holder, and corporate executive.

Sources of Additional Information

The American Bar Association annually publishes *A Review of Legal Education in the United States*, which provides detailed information on each of the 177 law schools approved by the ABA, State requirements for admission to legal practice, a directory of State bar examination administrators, and other information on legal education. Single copies are free from the ABA, but there is a fee for multiple copies. Free information on the bar examination, financial aid for law students, and law as a career may also be obtained from:

☞ Member Services, American Bar Association, 541 North Fairbanks Court, Chicago, IL 60611-3314.

Information on the LSAT, the Law School Data Assembly Service, applying to law school, and financial aid for law students may be obtained from:

☞ Law School Admission Services, P.O. Box 40, Newtown, PA 18940. Phone: (215) 968-1001.

The specific requirements for admission to the bar in a particular State or other jurisdiction may also be obtained at the State capital from the clerk of the Supreme Court or the administrator of the State Board of Bar Examiners.

Paralegals

(D.O.T. 119.267-022 and -026)

Nature of the Work

Not all legal work requires a law degree. Lawyers are often assisted in their work by paralegals—also called "legal assistants"—who perform many of the same tasks as lawyers, except for those tasks considered to be the practice of law.

Paralegals work directly under the supervision of lawyers. Although the lawyers assume responsibility for the legal work, they often delegate to paralegals many of the tasks they perform as lawyers. Paralegals are prohibited from setting legal fees, giving legal advice, or presenting a case in court.

Paralegals generally do background work for lawyers. To help prepare cases for trial, paralegals investigate the facts of cases to make sure that all relevant information is uncovered. Paralegals may conduct legal research to identify the appropriate laws, judicial decisions, legal articles, and other materials that may be relevant to clients' cases. After organizing and analyzing all the information, paralegals may prepare written reports that attorneys use to decide how cases should be handled. Should attorneys decide to file lawsuits on behalf of clients, paralegals may help prepare the legal arguments, draft pleadings to be filed with the court, obtain affidavits, and assist the attorneys during trials. Paralegals also keep files of all documents and correspondence important to cases.

Besides litigation, paralegals may also work in areas such as bankruptcy, corporate law, criminal law, employee benefits, patent and copyright law, and real estate. They help draft documents such as contracts, mortgages, separation agreements, and trust instruments. They may help prepare tax returns and plan estates. Some paralegals coordinate the activities of the other law office employees and keep the financial records for the office.

Paralegals who work for corporations help attorneys with such matters as employee contracts, shareholder agreements, stock option plans, and employee benefit plans. They may help prepare and file annual financial reports, maintain corporate minute books and resolutions, and help secure loans for the corporation. Paralegals may also review government regulations to make sure that the corporation operates within the law.

The duties of paralegals who work in government vary depending on the type of agency that employs them. Generally, paralegals in government analyze legal material for internal use, maintain reference files, conduct research for attorneys, collect and analyze evidence for agency hearings, and prepare informative or explanatory material on the law, agency regulations, and agency policy for general use by the agency and the public.

Paralegals employed in community legal service projects help the poor, the aged, and other persons in need of legal aid. They file forms, conduct research, and prepare documents. When authorized by law, they may represent clients at administrative hearings.

Some paralegals, usually those in small and medium-sized law firms, have varied duties. One day the paralegal may do research on judicial decisions on improper police arrests and the next day may help prepare a mortgage contract. This requires a general knowledge of many areas of the law.

Some paralegals who work for large law firms, government agencies, and corporations, specialize in one area of the law. Some specialties are real estate, estate planning, family law, labor law, litigation, and corporate law. Even within specialties, functions often are broken down further so that paralegals may deal with one narrow area of the specialty. For example, paralegals who specialize in labor law may deal exclusively with employee benefits.

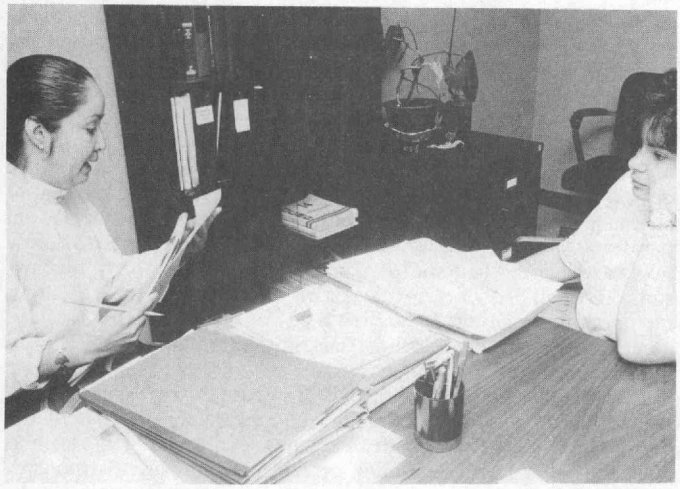
A growing number of paralegals are using computers in their work. Computer software packages are increasingly used to search legal literature stored in the computer and identify legal texts relevant to a specific subject. In litigation that involves many supporting documents, paralegals may use computers to organize and index the material. Paralegals may also use computer software packages to perform tax computations and explore the consequences of possible tax strategies for clients.

Working Conditions

Paralegals do most of their work at desks in offices and law libraries. Occasionally, they travel to gather information and perform other duties.

Paralegals employed by corporations and government work a standard 40-hour week. Although most paralegals work year round, some are temporarily employed during busy times of the year then released when work diminishes. Paralegals who work for law firms sometimes work very long hours when they are under pressure to meet deadlines. Some law firms reward such loyalty with bonuses and additional time off.

Paralegals handle many routine assignments, particularly when they are inexperienced. Some find that these assignments offer little



Paralegals may have to consult with clients to gather relevant information for court cases.

challenge and become frustrated with their duties. However, paralegals usually assume more responsible and varied tasks as they gain experience. Furthermore, as new laws and judicial interpretations emerge, paralegals are exposed to many new legal problems that make their work more interesting and challenging.

Employment

Paralegals held about 95,000 jobs in 1992. Private law firms employed the vast majority; most of the remainder worked for various levels of government. Paralegals are found in nearly every Federal Government agency; the Departments of Justice, Treasury, Interior, and Health and Human Services, and the General Services Administration are the largest employers. State and local governments and publicly funded legal service projects employ paralegals as well. Banks, real estate development companies, and insurance companies also employ small numbers of paralegals.

Training, Other Qualifications, and Advancement

There are several ways to enter the paralegal profession. Employers generally require formal paralegal training; several types of training programs are acceptable. However, some employers prefer to train their paralegals on the job, promoting experienced legal secretaries or hiring persons with college education but no legal experience. Other entrants have experience in a technical field that is useful to law firms, such as a background in tax preparation for tax and estate practice or nursing or health administration for personal injury practice.

Over 600 formal paralegal training programs are offered by 4-year colleges and universities, law schools, community and junior colleges, business schools, and proprietary schools. In 1993, 177 programs had been approved by the American Bar Association (ABA). Although this approval is neither required nor sought by many programs, graduation from an ABA-approved program can enhance one's employment opportunities. The requirements for admission to formal training programs vary widely. Some require some college courses or a bachelor's degree. Others accept high school graduates or persons with legal experience. A few schools require standardized tests and personal interviews.

Most paralegal programs are completed in 2 years, although some take as long as 4 years and award a bachelor's degree upon completion. Other programs take only a few months to complete, but require a bachelor's degree for admission. Programs typically include a combination of general courses on subjects such as the law and legal research techniques, and courses that cover specialized areas of the law, such as real estate, estate planning and probate, litigation, family law, contracts, and criminal law. Many employers prefer applicants with training in a specialized area of the law. Programs also increasingly include courses that introduce students to the legal applications of computers. Many paralegal training programs include an internship in which students gain practical experience by working for several months in a law office, corporate legal department, or government agency. Experience gained in internships is an asset when seeking a job after graduation. Depending on the program, graduates may receive a certificate, an associate degree, or, in some cases, a bachelor's degree.

The quality of paralegal training programs varies; the better programs generally emphasize job placement. Prospective students should examine the experiences of recent graduates of programs in which they are considering enrolling.

Paralegals need not be certified, but the National Association of Legal Assistants has established standards for voluntary certification which require various combinations of education and experience. Paralegals who meet these standards are eligible to take a 2-day examination given each year at several regional testing centers by the Certifying Board of Legal Assistants of the National Association of Legal Assistants. Persons who pass this examination may use the designation Certified Legal Assistant (CLA). This designation is a sign of competence in the field and may enhance employment and advancement opportunities.

Paralegals must be able to handle legal problems logically and effectively communicate, both orally and in writing, their findings and opinions to their supervising attorney. They must understand legal terminology and have good research and investigative skills. Familiarity with the operation and applications of computers in legal research and litigation support is increasingly important. Paralegals must always stay abreast of new developments in the law that affect their area of practice.

Because paralegals often deal with the public, they must be courteous and uphold the high ethical standards of the legal profession. A few States have established ethical guidelines that paralegals in the State must follow.

Experienced paralegals usually are given progressively more responsible duties and less supervision. In large law firms, corporate legal departments, and government agencies, experienced paralegals may supervise other paralegals and clerical staff and delegate work assigned by the attorneys. Advancement opportunities include promotion to managerial and other law-related positions within the firm or corporate legal department. However, some paralegals find it easier to move to another law firm when seeking increased responsibility or advancement.

Job Outlook

Employment of paralegals is expected to grow much faster than the average for all occupations through the year 2005. Job opportunities are expected to expand as more employers become aware that paralegals are able to do many legal tasks for lower salaries than lawyers. Both law firms and other employers with legal staffs should continue to emphasize hiring paralegals so that the cost, availability, and efficiency of legal services can be improved.

New jobs created by rapid employment growth will create most of the job openings for paralegals in the future. Other job openings will arise as people leave the occupation. Although the number of job openings for paralegals is expected to increase significantly through the year 2005, so will the number of persons pursuing this career. Thus, keen competition for jobs should continue as the growing number of graduates from paralegal training programs keeps pace with employment growth. Still, job prospects are expected to be favorable for graduates of highly regarded formal programs.

Private law firms will continue to be the largest employers of paralegals as a growing population needs more legal services. The growth of prepaid legal plans also should contribute to the demand for the services of law firms. A growing array of other organizations, such as corporate legal departments, insurance companies, real estate and title insurance firms, and banks will also hire paralegals.

Job opportunities for paralegals will expand even in the public sector. Community legal service programs—which provide assistance to the poor, the aged, minorities, and middle-income families—operate on limited budgets and will employ more paralegals to keep expenses down and serve the most people. Federal, State, and local government agencies, consumer organizations, and the courts also should continue to hire paralegals in increasing numbers.

To a limited extent, paralegal jobs are affected by the business cycle. During recessions, demand declines for some discretionary legal services, such as planning estates, drafting wills, and handling real estate transactions. Corporations are less inclined to initiate litigation when falling sales and profits lead to fiscal belt tightening. As a result, full-time paralegals employed in offices adversely affected by a recession may be laid off or have their work hours reduced. On the other hand, during recessions, corporations and individuals are more likely to face other legal problems, such as bankruptcies, foreclosures, and divorces, that require legal assistance. Furthermore, the continuous emergence of new laws and judicial interpretations of existing laws creates new business for lawyers and paralegals without regard to the business cycle.

Earnings

Earnings of paralegals vary greatly. Salaries depend on the education, training, and experience the paralegal brings to the job, the type and size of employer, and the geographic location of the job. Generally, paralegals who work for large law firms or in large metropolitan areas earn more than those who work for smaller firms or in less populated regions.

Paralegals had an average annual salary of about $28,300 in 1993, according to a utilization and compensation survey by the National Association of Legal Assistants. Starting salaries of paralegals averaged $23,400, while paralegals with from 6 to 10 years of experience averaged $28,200 a year. Salaries of paralegals with from 11 to 15 years of experience averaged $29,800 annually, according to the same survey. In addition to a salary, many paralegals received an annual bonus, which averaged $1,700 in 1993. Employers of the majority of paralegals provided life and health insurance benefits and contributed to a retirement plan on their behalf.

Paralegal Specialists hired by the Federal Government in 1993 started at about $18,000 or $23,000 a year, depending on their training and experience. The average annual salary of paralegals who worked for the Federal Government in 1993 was about $37,600.

Related Occupations

Several other occupations also call for a specialized understanding of the law and the legal system but do not require the extensive training of a lawyer. Some of these are abstractors, claim examiners, compliance and enforcement inspectors, occupational safety and health workers, patent agents, police officers, and title examiners.

Sources of Additional Information

General information on a career as a paralegal and a list of paralegal training programs approved by the American Bar Association may be purchased for $5 from:

☞ Standing Committee on Legal Assistants, American Bar Association, 750 North Lake Shore Dr., Chicago, IL 60611.

For information on certification of paralegals, schools that offer training programs in a specific State, and standards and guidelines for paralegals, contact:

☞ National Association of Legal Assistants, Inc., 1601 South Main St., Suite 300, Tulsa, OK 74119.

Information on a career as a paralegal, schools that offer training programs, and local paralegal associations can be obtained from:

☞ National Federation of Paralegal Associations, P.O. Box 33108, Kansas City, MO 64114.

Information on paralegal training programs may be obtained from:

☞ American Association for Paralegal Education, P.O. Box 40244, Overland Park, KS 66204.

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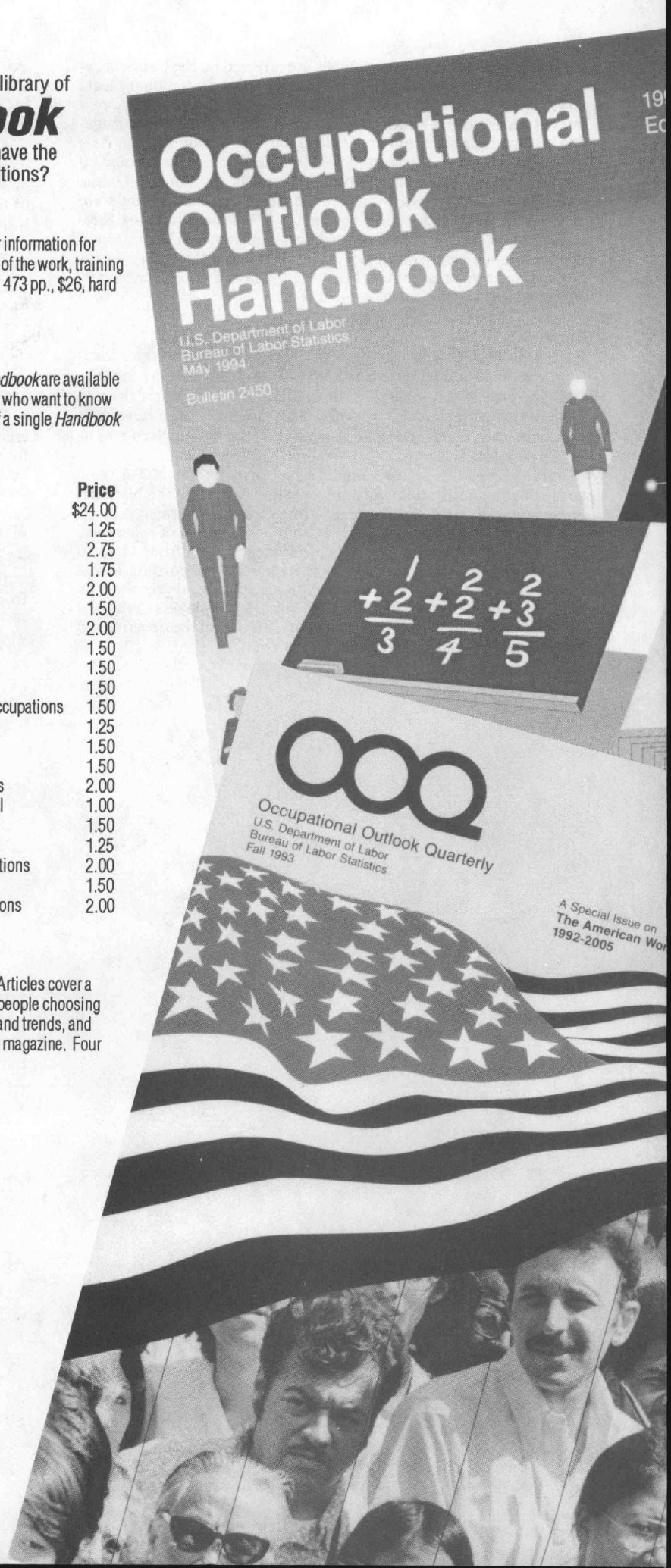

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