The Sociology of Work:

Structures and Inequalities

STEVEN P. VALLAS

Northeastern University

WILLIAM FINLAY

University of Georgia

AMY S. WHARTON

Washington State University

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Chapter 3

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Studying Workers and Work: Research Methods in the Field

In 1974 Michael Burawoy went to work as a machine operator at the Allied Corporation on Chicago's east side. He said it was the hardest job he ever had. Burawoy did more at Allied than operate machines, however; he also spent his time observing and interacting with his coworkers. As a sociologist, his goal was to answer one simple question: "Why do workers work as hard as they do?" (1979: 35). Burawoy follows a long tradition of sociologists who study work and workers using the method of participant observation.

Shelley Correll began her research on gender differences in scientific careers on the campus of Stanford University, where she recruited undergraduate students to be subjects in an experiment. Correll conducted an experiment designed to test the effects of cultural beliefs about gender on women's and men's career aspirations. The results of this study showed that aspirations are shaped by people's perceptions of their competence at particular tasks and that these perceptions are heavily biased along gender lines (Correll 2004).

In the mid-1990s, a team of researchers led by Philip Moss and Chris Tilly set out to better understand racial discrimination in urban labor markets. These researchers were particularly interested in employers; in particular, they wanted to know more about how employers recruit, screen, and evaluate prospective job candidates and how they perceive different racial and ethnic groups. Moss and Tilly's methodology combined face-to-face interviews with a sample of employers in four large U.S. cities with a larger telephone survey of this population. We will be discussing the findings from their book, Stories Employers Tell (2001), later in this chapter.

Cotter and his colleagues used a different type of methodology to study gender and racial disparities in earnings (Cotter, Hermsen, and Vanneman 1999). Instead of collecting their own data through participant observation, an experiment, or via surveys and interviews, these researchers analyzed data collected by the U.S. government. Relying on these data enabled Cotter et al. to trace the patterns of gender- and race-based wage inequality over time and across metropolitan areas. Their sample contained almost three million workers; this included white, African-American, Asian, and Hispanic women and men between the ages of 25 and 54 who worked full-time, year-round for pay in a metropolitan area.

This chapter takes a systematic look at the ways sociologists—like those profiled above—have studied workers and the workplace; that is, we explore their research methodologies. Babbie defines methodology as "the science of finding out" (2004: 6). Our interest here is in understanding the tools sociologists of work employ to "find out" answers to their research questions. The examples mentioned above represent some of the most commonly used methodologies.

As these examples illustrate, the methodologies used to study work and workers are as diverse as those applied to the study of any other area of social life. This diversity in part reflects the discipline of sociology and the ways sociologists historically have gone about collecting data and answering research questions. Methodological diversity in the area of work also stems from the subject matter. Work settings and their inhabitants are diverse, and the questions sociologists ask are wide-ranging.

For instance, some sociologists of work are interested in social-psychological questions relating to people's experiences of work or sense of themselves as workers. Others are interested in the larger contexts within which work unfolds. They may want to understand how people interact at work or examine other social processes that occur on the job. Still others explore the broader structural, cultural, or historical features of work. In general, the types of questions sociologists ask and the perspective they bring to bear on their subject matter shape the methodology they are likely to use in their research.

We will encounter these areas of research and many more in the following chapters. The important point for now, however, is that data collection and analysis are important parts of sociological work, just as they are for most scientific (and social scientific) disciplines. In order to understand the world, it is necessary to study it systematically. But there are many ways to do this. The particular methodology one uses depends largely on the nature of the research question, as we have mentioned. Each methodology has its own strengths and weaknesses as a technique for gathering data and providing information.

This chapter focuses on four methodologies—official statistics, surveys and interviews, ethnographies, and experiments—giving examples of how they have been used and evaluating their strengths and weaknesses as methods of data collection. The chapter concludes with a broader look at the value of sociological research on work.

Methods for Studying Work and Workers: Official Statistics

One of the most important sources of sociological data on workers and work is the United States government and its departments. These agencies employ sociologists who use their methodological skills to collect data. These data are considered "official" statistics; that is, they are collected by employees of government agencies, overseen by Congress, and used for official purposes. The research by Cotter et al. (1999) on gender and racial wage disparities (described at the beginning of this chapter) provides one example of how sociologists have put official statistics to use in the study of work.

While many government agencies are involved in the collection, analysis, and dissemination of data, sociologists of work rely most heavily on data collected by the United States Census Bureau and the Bureau of Labor

Statistics. These agencies' involvement in data collection extends back many years: The first census was conducted in 1790 and was prescribed by the U.S. Constitution. Congress established the Census Bureau as a permanent agency of the U.S. government in 1902, and it now employs over 12,000 people (http://www.census.gov/acsd/www/history.html). The Bureau of Labor Statistics was created by an act of Congress in 1913 as part of the Department of Labor.

The census was created for the specific purpose of apportioning seats in the U.S. House of Representatives, and census data are still used in this way. These data are also used for many other official purposes, such as distributing federal funds and planning by federal, state, and local governments. The monthly unemployment rate is just one of many important official statistics derived from data collected by the Bureau of Labor Statistics (see Box 3.1 and Figure 3.1).

Definitions That Matter

Although concepts such as "labor force" seem self-explanatory, when U.S. government agencies collect, analyze, and disseminate information that contains these words, they have a precise meaning. Making sense of official statistics thus requires us to define these important terms. This is necessary to ensure a common framework of understanding as we begin our examination of sociological methodologies used to study workers and work.

Consider first the words "occupation" and "job." These words are often used interchangeably in everyday conversation as people communicate about the kind of work they do. The "everyday" meanings of these words evolved over the course of the Industrial Revolution as work became physically and temporally separate from other activities. "Occupation" and "job" came

gradually to refer to specific activities linked to a larger division of labor, as well as signifying a person's social standing and role.

Government agencies involved in the collection of data about workers and work rely on somewhat more precise definitions of these words. An "occupation" is "a set of activities or tasks that employees are paid to perform" (http://www.bls.gov/bls/glossary); people who perform essentially the same tasks are members of the same occupation, regardless of the industry or setting where they work. Occupation thus is a fairly general term. In contrast, a "job" is a more detailed description of a person's work, providing information about where and for whom the work is being performed.

The details provided by knowledge of a person's job stem in part from the fact that descriptions of jobs often come with clues about the establishment or industry where a person is employed. An "establishment" is defined as "a single physical location where business is conducted or where services or industrial operations are performed" (http://help.econ.census.gov/econhelp/glossary). A company may have several different establishments in different locations. For example, consider Starbucks or Target. Though each is a single company, they have establishments all over the United States (and the world). "Industry" refers to "a group of establishments that provide similar products or provide similar services" (http:// www.bls.gov/bls/glossary). Some occupations, such as insurance adjuster, are industry-specific. Many others, however, can be performed in several industries. People employed in the occupation of research forester, for example, can work in the public sector for agencies like the U.S. Forest Service, or they can work for private timber companies, among other possibilities.

BOX 3.1 The Bureau of Labor Statistics: Measuring Unemployment

Why does the government collect statistics on the unemployed?

To know about the extent and nature of unemployment. How many people are unemployed? How did they become unemployed? How long have they been unemployed? Are their numbers growing or declining? Are they men or women? Are they young or old? Are they white or black or of Hispanic origin? Are they skilled or unskilled? Are they the sole support of their families, or do other family members have jobs? Are they more concentrated in one area of the country than another? After these statistics are obtained, they have to be interpreted properly so they can be used-together with other economic data-by policymakers in making decisions as to whether measures should be taken to influence the future course of the economy or to aid those affected by joblessness.

Where do the statistics come from?

Because unemployment insurance records, which many people think are the source of total unemployment data, relate only to persons who have applied for such benefits, and since it is impractical to actually count every unemployed person each month, the government conducts a monthly sample survey called the Current Population Survey (CPS) to measure the extent of unemployment in the country. The CPS has been conducted in the United States every month since 1940 when it began as a Work Projects Administration project. It has been expanded and modified several times since then. As explained later, the CPS estimates, beginning in 1994, reflect the results of a major redesign of the survey.

What are the basic concepts of employment and unemployment?

The basic concepts involved in identifying the employed and unemployed are quite simple:

- · People with jobs are employed.
- People who are jobless, looking for jobs, and available for work are unemployed.
- People who are neither employed nor unemployed are not in the labor force.

Who is counted as employed?

Not all of the wide range of job situations in the American economy fit neatly into a given category. For example, people are considered employed if they did any work at all for pay or profit during the survey week. This includes all part-time and temporary work, as well as regular full-time year-round employment. Persons also are counted as employed if they have a job at which they did not work during the survey week because they were:

- · On vacation:
- III:
- · Experiencing child-care problems;
- Taking care of some other family or personal obligation;
- · On maternity or paternity leave;
- · Involved in an industrial dispute; or
- Prevented from working by bad weather.

Who is counted as unemployed?

Persons are classified as unemployed if they do not have jobs, have actively looked for work in the prior four weeks, and are currently available for work.

Who is not in the labor force?

All members of the civilian noninstitutional population are eligible for inclusion in the labor force,

BOX 3.1 continued

and those 16 and over who have a job or are actively looking for one are so classified. All others—those who have no job and are not looking for one—are counted as "not in the labor force." Many who do not participate in the labor force are going to school or are retired. Family responsibilities keep others out of the labor force. Still others have a physical or mental disability which prevents them from participating in labor force activities.

What about cases of overlap?

When the population is classified according to who is employed, unemployed, and not in the labor force on the basis of their activities during a given calendar week, situations are often encountered where individuals have engaged in more than one activity. Since persons are counted only once, it must be decided which activity will determine their status. Therefore, a system of priorities is used:

- Labor force activities take precedence over non-labor force activities.
- Working or having a job takes precedence over looking for work.

Employed persons consist of:

- All persons who did any work for pay or profit during the survey reference week;
- All persons who did at least 15 hours of unpaid work in a family-operated enterprise; and
- All persons who were temporarily absent from their regular jobs because of illness, vacation, bad weather, industrial dispute, or various personal reasons.

Unemployed persons are:

 All persons who were not classified as employed during the survey reference week,

- made specific active efforts to find a job during the prior four weeks, and were available for work; and
- All persons who were not working and were waiting to be called back to a job from which they had been temporarily laid off.

Persons not in the labor force are those who not classified as employed or unemployed during the survey reference week.

How large is the labor force?

The labor force, then, is not a fixed number of people. It increases with the long-term growth of the population, it responds to economic forces and social trends, and its size changes with the seasons. On average in 2000, there were roughly 135 million employed and 6 million unemployed making up a labor force of 141 million persons. There were about 69 million persons not in the labor force.

How are seasonal fluctuations taken into account?

As suggested in the previous section, the number of employed and unemployed persons fluctuates during the year in a pattern that tends to repeat itself year after year and which reflects holidays, vacations, harvest time, seasonal shifts in industry production schedules, and similar occurrences. Because of such patterns, it is often difficult to tell whether developments between any two months reflect changing economic conditions or merely normal seasonal fluctuations. To deal with such problems, a statistical technique called seasonal adjustment is used.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Frequently Asked Questions," (http://www.bls.gov/dolfaq/blsfaqtoc.htm).

12
10
8
Annual Average
Unemployment Rate

2
0
1970
1980
1990
2000
2010

FIGURE 3.1 Annual average unemployment rate for civilian labor force 16 years and older (percent).

Source: Bureau of Labor Statistics. Annual average unemployment rate, civilian labor force 16 years and over (percent) (http://www.bls.gov/cps/cpsaat2.pdf).

These are among the most frequently used concepts in the sociology of work, as they are the primary ways in which people's work is described. As we will see, these concepts organize virtually all of the information about work that is collected, analyzed, and disseminated by government agencies, and they represent key variables in sociological analyses as well.

Data Sources and Methods of Data Collection

Most work-related data collected by the U.S. government is collected through surveys or interviews. Surveys are typically distributed through the mail or via the computer, while interviews are conducted in person or over the telephone. The participants in both surveys and interviews can be individuals, households, or establishments.

All data collection efforts—large or small—must address issues of sampling. Sampling refers

to "the process of selecting observations" (Babbie 2004: 180). Once researchers have decided how to collect their data (e.g., through surveys, interviews, ethnographies), they must decide on a strategy for choosing from whom or where to collect information. This is an extremely important task. Even the most well-designed survey will yield little useful information if there are problems with the sampling techniques.

Sampling starts with identification of the population. This is the "universe" or the theoretical target of the research. A population could refer to a group of individuals (e.g., currently employed women), households (e.g., households containing young children), or other units, such as occupations, establishments, etc. Samples are selected from the population identified for a particular research project.

There are many types of sampling. For our purposes, the most important distinction is between probability and nonprobability sampling techniques. Probability sampling is a method designed to ensure that the sample selected reflects the variations that exist in the population as a whole. For example, because the U.S. labor force is approximately 46 percent female and 54 percent male, a probability sample of employed workers should yield approximately similar percentages of women and men. To the extent that this has been achieved, we say that the sample is "representative" of the population to which it refers.

Probability sampling is not always feasible or desirable. It is not feasible when the population from which the sample is to be drawn cannot be easily identified. For example, Gowan (2002) studied homeless men's work in the recycling industry in San Francisco. The very nature of homelessness inhibited her ability to identify the members and characteristics of this population, thus making probability sampling an inappropriate way to select research subjects. Probability sampling may also be undesirable, not suited to exploring a particular research question. In these instances, researchers may use a convenience sample, relying on available and accessible subjects, or they may use the strategies of "purposive" or "snowball" sampling. To select a purposive sample, the researcher uses his or her judgment about the best subjects to study, given the aims of the research. Snowball sampling is a technique whereby each person surveyed or interviewed suggests additional respondents. Gowan relied on both strategies in her study of homeless men. Nonprobability sampling can yield important insights and information, but its drawback is that results derived in this fashion cannot be considered representative of a population or generalizable beyond the particular group studied.

Probability Sampling and Official Statistics

Virtually all official statistics are derived from some type of probability sampling and thus are representative of the relevant population. The decennial Census is a study of the U.S. population conducted every ten years. Most adults have filled out a census form at one time or another; the "short form" is, in principle, to be completed by every individual in the United States. Because the short form is theoretically given to everyone in the United States-the entire populationthere is no sampling required. Probability sampling is used by the U.S. Census to identify which households should receive the "long form." One in every six households receives this version. Sociologists of work are particularly interested in these results, since the long form contains questions on people's employment status, occupations, employers, and income, among other things.

Sociologists of work also analyze data collected by the Bureau of Labor Statistics (BLS) (http://www.bls.gov), a federal agency that is part of the Department of Labor. The BLS collects data on many topics of interest to sociologists of work. Sociologists studying patterns of wage inequality, for instance, would likely turn to the BLS for the most up-to-date data on the average wages paid to workers in over 700 of the largest occupations. Researchers exploring trends in workplace injuries or deaths might rely on the BLS's annual survey of workplace injuries, illnesses, and fatalities.

One of the BLS data sources most frequently used by sociologists of work is the Current Population Survey (CPS). The CPS is a monthly survey of a representative sample of approximately 60,000 U.S. households. Administered through personal or telephone interviews, this survey includes questions relating to household

members' employment status, such as their occupation, industry, hours of work, and earnings, among other factors. As described in Box 3.1, the CPS also collects data on the unemployed, including the duration of and reason for unemployment. In addition to information on their employment situation, respondents are asked to provide detailed demographic data (e.g., sex, race, ethnic origin, marital status, family relationship, or Vietnam-era veteran status). CPS data are useful for sociologists interested in understanding broad patterns and trends affecting the labor force and for comparing the employment situations of different demographic groups.

Sociologists of work are also interested in issues that pertain to businesses and employers. The Economic Census is useful for this purpose. It presents a profile of the U.S. economy at the national, state, and local levels. Unlike the Decennial Census, which surveys individuals or households, the Economic Census collects information from "establishments."

The Economic Census takes place every five years. For the most recent survey, conducted in 2007, the Census Bureau sent forms to over 5 million of the largest U.S. companies and a sample of smaller firms. The Bureau created over 650 versions of the survey, each tailored to a particular industry or sector. Businesses were asked to provide information about their size, receipts, payroll, etc. Collecting data at the establishment level is useful for sociologists studying organizational structures and processes.

Coding, Classifying, and Describing Occupations and Industries

The Census Bureau and the Bureau of Labor Statistics have devoted much attention to the coding and classification of occupations and industries. These coding and classification schemes are used to organize information collected not only by these agencies, but by other federal agencies as well. They are also used in other large-scale surveys, such as the National Organizations Survey (NOS) and the National Survey of the Changing Workforce (NSCW), and in many other research projects. In all cases, their primary function is to provide a common framework for describing the types of work people do.

Efforts to classify occupations have resulted in the creation of the Standard Occupational Classification (SOC) System, an elaborate index of major occupations in the United States. The SOC has been revised several times over the years, most recently in 2000, to account for changes in the occupational structure over time and reflect as accurately as possible the nature of the work people perform. To better grasp the challenge of this task, consider that the 2000 census counted 129.7 million employed civilians (over age 16). Every person's occupation was coded according to SOC guidelines into one of 509 detailed occupational categories, which were then categorized into 22 major occupational groups. The 22 groups are further classified into one of six broad categories. To see all these categories, and to learn more about individual occupations, go to the Bureau of Labor Statistics' website: http:// www.bls.gov/soc/.

Figure 3.2 shows how workers were distributed across the 22 major occupational groups in 2006. As these data reveal, office and administrative support positions employed the largest number of workers in 2006, followed by sales and related occupations. By contrast, farming, fishing, and forestry occupations employed the fewest number of workers, with less than half a million

Farming, Fishing, and Forestry Legal Life, Physical, and Social Science Arts, Design, Entertainment, Sports Community and Social Services Architecture and Engineering Protective Service Computer and Mathematical Science
Personal Care and Service Building and Grounds Cleaning Installation, Maintenance, and Repair Business and Financial Management Construction and Extraction Healthcare Practitioner and Technical Education, Training, and Library Transportation and Material Moving Production Food Preparation and Serving Related Sales and Related
Office and Administrative Support 20 25 10 15 □ Employment in Millions

FIGURE 3.2 Total employment by major occupational group, 2006.

Source: Bureau of Labor Statistics. Occupational Employment and Wages, 2006. From Table 1: National employment and wage data from the Occupational Employment Statistics survey by occupation, May 2006.

people working in these jobs. The differences between occupational groups listed in this figure do not coincide with what may be more familiar distinctions between "blue-collar" and "white-collar" work or "mental" and "manual" labor. While a once-useful shorthand for capturing "a status structure in which social standing rested on whether people's hands were clean or dirty at the end of the day," these distinctions have less and less relevance in today's global service economy (Barley and Kunda 2001: 82–83).

Occupational data from the census can also be cross-classified with other variables to provide an informative snapshot of the U.S. labor force. For example, Figure 3.3 shows how each gender and racial-ethnic group is distributed across five broad occupational categories.

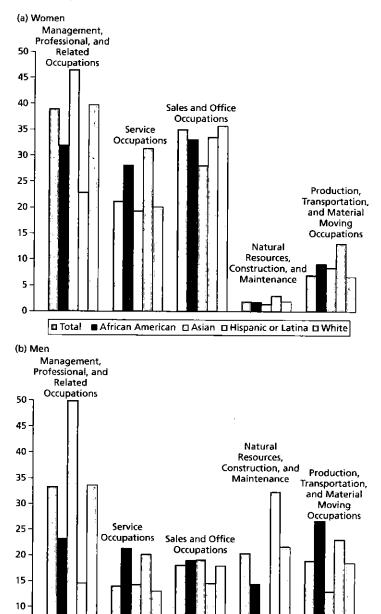
Recall that the decennial census has been conducted every decade since 1790. Because each census contains some information about people's employment, there exists an extensive historical record of the occupational distribution of the U.S. labor force. These data have been

extensively analyzed by sociologists and others interested in exploring changes in the occupational structure over time. Comparing occupations over time is not an easy task, however.

As Pilot explains, "[c]oming up with a list of occupations that can be construed as comparable over [50 years] is tricky at best and hazardous at worst, because of changes in occupational classification, definition, coverage, and skills" (1999: 11). The occupation of "desktop-publishing specialist," for example, did not exist in the early or even mid-1900s, while "typewriter servicemen"—an occupation that was recognized in the occupational coding schemes of the mid-1900s—was gone by the end of the twentieth century (Pilot 1999). These examples help remind us that tracking changes in a society's occupational distribution is not simply a technical exercise in coding and classification. Instead, identifying these changes helps us gain insight into much broader social patterns and trends. Both the rise of the desktop-publishing specialist and the demise of the typewriter serviceman, for example, reflect the technological

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FIGURE 3.3 Percent distribution of women and men by major occupational category, race, and Hispanic ethnicity, 2006.



Source: U.S. Bureau of Labor Statistics. Employment and Earnings, January 2007. Table 10: Employed persons by occupation, race Hispanic or Latino ethnicity, and sex.

□ Total ■ African American □ Asian □ Hispanic or Latino □ White

revolution spawned by the development and widespread use of computer technology.

Other Descriptions of Occupations

Two other sources of occupational information are the Dictionary of Occupational Titles (DOT) and the Occupational Outlook Handbook (OOH). Both were initially created to aid job seekers, career counselors, and others directly involved in matching people with jobs. The first edition of the DOT was published in 1939, with the OOH following ten years later. Both have been revised regularly over time and are now fully available online. The DOT lists close to 30,000 job titles and contains detailed information about tasks performed, educational requirements, and skills for over 12,000 job types (http://www.occupationalinfo. org). The OOH also contains information about occupations, including a description of the work performed, working conditions, qualifications, earnings, and the employment outlook for the job (http://www.bls.gov/oco/home.htm).

One interesting component of the OOH is its projections of occupational and industrial growth and decline. Approximately every two years, analysts at the Bureau of Labor Statistics attempt to anticipate occupational and industrial trends for the next decade. In order to make these estimates, analysts must factor in a number of variables, such as the demographic characteristics of the population and expected changes in the economy as a whole.

Tables 3.1 to 3.3 report the most recent published occupational projections (Dohm and Shniper 2007). Each of these lists offers a glimpse into the future of American society. In that respect, they tell us much more than whether a particular occupation is growing or declining. Rather, they tell a story about some of the factors

expected to shape American society over the next ten years and the ways those factors will influence the kinds of work people do. For example, American society, as we know, is rapidly "graying" as the Baby Boomers move into retirement. This will affect the workplace in many ways. Most important, as Tables 3.1 and 3.2 show, is the projected growth in health-related occupations, particularly those in health-care support positions. Expansion in health care "reflects an aging population that requires more healthcare, a wealthier population that can afford better healthcare, and advances in medical technology that permit more health problems to be treated aggressively" (Hecker 2004: 101).

Another story contained in these projections concerns the ongoing impact of computer technology on every area of work and life. The fastest growing occupation overall, for instance, is network systems and data communications analysts, and several other occupations on the list are computer-related (e.g., computer systems analysts, computer software engineers, database administrators). Developments in computer technology do not only fuel occupational growth, however. Technological change may also help to explain occupational decline (see Table 3.3). Among the most rapidly declining occupations, for example, are word processors and typists and data entry keyers. Innovations in information technology have automated many clerical tasks and reduced demand for workers in these areas. Telemarketing is also projected to decline as systems for blocking such calls gain in sophistication and use.

Industry Classification Systems

Similar systems were devised to code and classify industries. Until recently, government agencies and everyone who used their data relied on the

TABLE 3.1 Fastest Growing Occ	supations, 2006–2016
-------------------------------	----------------------

Network systems and data communications analysts
Personal and home care aides
Home health aides
Computer software engineers, applications
Veterinary technologists and technicians
Personal financial advisors
Make-up artists, theatrical and performance
Medical assistants
Veterinarians
Substance abuse and behavioral disorder counselors
Skin care specialists
Financial analysts .
Social and human service assistants
Gaming surveillance officers and gaming investigators
Physical therapy assistants
Pharmacy technicians
Forensic science technicians
Dental hygienists
Mental health counselors
Mental health and substance abuse social workers
Marriage and family therapists
Dental assistants
Computer systems analysts
Database administrators
Computer software engineers, systems software
Gaming and sports book writers and runners
Environmental science and protection technicians, including health
Manicurists and pedicurists
Physical therapists
Physician assistants
Source: Dohm and Shniper 2007.

TABLE 3.2 Occupations with the Largest Absolute Job Growth, 2006–2016 (Projected)

Registered nurses
Retail salespersons
Customer service representatives
Combined food preparation and serving workers, including fast food
Office clerks, general
Personal and home care aides
Postsecondary teachers
Janitors and cleaners, except maids and housekeeping cleaners
Nursing aides, orderlies, and attendants
Bookkeeping, accounting, and auditing clerks
Waiters and waitresses
Child care workers
Executive secretaries and administrative assistants
Computer software engineers, applications
Accountants and auditors
Landscaping and groundskeeping workers
Elementary school teachers, except special education
Receptionists and information clerks
Truck drivers, heavy and tractor trailer
Maids and housekeeping cleaners
Security guards
Carpenters
Management analysts
Medical assistants
Computer systems analysts
Maintenance and repair workers, general
Network systems and data communication analysts
Food preparation workers
Teacher assistants
Source: Dohm and Shniper 2007.

Source: Dohm and Shniper 2007.

TABLE 3.3 Occupations with the Largest Absolute Job Declines, 2006-2016 (Projected)

Stock clerks and order fillers Cashiers, except gaming Packers and packagers, hand File clerks Farmers and ranchers Order clerks Sewing machine operators Electrical and electronic equipment assemblers Cutting, punching, and press machine setters, operators, and tenders, metal and plastic Telemarketers Inspectors, testers, sorters, samplers, and weighers First-line supervisors/managers of production and operating workers Computer operators Photographic processing machine operators Driver/sales workers Machine feeders and offbearers Packaging and filling machine operators and tenders Word processors and typists Paper goods machine setters, operators, and tenders Farmworkers and laborers, crop, nursery, and greenhouse Molding, coremaking, and casting machine setters, operators and tenders, metal and plastic Computer programmers Mail clerks and mail machine operators, except postal service Postal service mail sorters, processors, and processing machine operators Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic Lathe and turning machine tool setters, operators, and tenders, metal and plastic Prepress technicians and workers Switchboard operators, including answering service Data entry keyers Bindery workers

TABLE 3.4 Employment in Industry Supersectors, 2006

	Total Employed (in thousands)
Goods-producing industries	
Natural resources and mining	687
Construction	11,749
Manufacturing	16,377
Service-producing industries	
Trade, transportation, and utilities	28,783
Information	3,573
Financial activities	10,490
Professional and business services	14,868
Education and health services	29,938
Leisure and hospitality	12,145
Other services	7,088

Source: U.S. Bureau of Labor Statistics. Employment and Earnings, January 2007. Table 16: Employed persons in nonagricultural industries by sex and class of worker.

Standard Industrial Classification (SIC) system, devised in the 1930s as a way to classify the industries where people worked. The SIC coded just over 1,000 industries using a four-digit code. A new system, called the North American Industry Classification System (NAICS), is gradually replacing the SIC, however (http://www.census.gov/epcd/www/naics.html). The NACIS codes 1,170 detailed industries into ten "supersectors," as shown in Table 3.4.

NAICS was developed primarily to reflect two changes in the U.S. economy. The first is the rise of the service sector and other industries that were not well represented in the SIC. A second change involves the breaking down of economic borders, especially between the United States and its closest neighbors—Canada and Mexico. The NAICS was developed in collaboration with both countries, underscoring

the close economic ties between them and the United States.

Strengths and Weaknesses of Official Statistics

Despite their "official" status, it is important to understand that these data are not perfect and, like all data, have their own distinct strengths and weaknesses. The primary strengths of official statistics derive from their quality, availability, and cost. As discussed earlier, official statistics, such as CPS data, are drawn from nationally representative samples or can be statistically adjusted to reflect the U.S. population as a whole or a particular segment of it, such as a state or region or demographic group. These sampling techniques thus greatly enhance the quality of these data. When researchers analyze official statistics, they can be reasonably confident that their results are

generalizable to a larger population and are not purely idiosyncratic.

Because the BLS and the U.S. Census Bureau are agencies of the U.S. government with a congressional mandate to collect certain kinds of information, their employees typically have the financial and technical resources they need to do their work. More important, the products of these efforts belong to the public and can be accessed by researchers with minimal cost. High quality, availability, and low cost together make official statistics a useful tool for answering many kinds of sociological questions about workers and the workplace.

Like other data collected in national sample surveys, however, official statistics are limited in certain respects. Although CPS surveys occasionally do contain specially designed modules that ask about a particular issue or trend affecting workers, these surveys are designed to collect information from large cross-sections of the U.S. population. This broad coverage requires that the survey contain only straightforward, fairly objective questions. Sociologists who want to survey workers or employers about more complex issues or who are interested in a topic that requires focused attention on one narrowly drawn segment of the workforce will not find official statistics of much use. Instead, as we will see later, these sociologists are likely to design and distribute their own surveys.

It is also important to remember that the data-gathering efforts that produce official statistics are funded by Congress; their contents thus are subject to political scrutiny. Sociologists interested in politically sensitive or controversial issues are unlikely to find data on these topics in official statistics. Hence, while official statistics can be useful for some purposes, this methodology

is not well suited to the study of many topics of interest to sociologists of work.

Methods for Studying Work and Workers: Surveys and Interviews

Surveys are considered to be the most frequently used method of data collection in the social sciences (Babbie 2004). At one time or another, all of us have responded to a survey of one sort or another; most of us have probably responded to many different kinds of surveys, designed for many different purposes. College courses, for example, are typically evaluated by surveying the students about their experiences in the class and their views of the instructor. Public opinion polls, such as those conducted by The Gallup Organization, represent another type of survey. Gallup has been surveying samples of the U.S. population on a wide variety of matters since the mid-1930s (www.gallup.com). As we saw in the preceding section, census data are also collected via surveys of individuals, households, or establishments.

Surveys can be administered in different ways. The four most common means are by mail, by telephone, face-to-face, or via the Internet. Each has its own set of advantages and disadvantages; there is a large literature devoted to the design and implementation of each form of data collection (Dillman 2007). When properly used, all of these ways of collecting survey data can yield high-quality results. Which method is most appropriate depends on the research question and sample, as well as practical matters, such as the research budget.

Although surveys can be administered in several different ways, virtually all of them rely on some kind of relatively standardized questionnaire; that is, all survey respondents are asked the same questions in the same order and format. Standardization is important because it enables researchers to aggregate responses for the purpose of describing a particular segment of people (e.g., students in a course). In addition, survey researchers attempt to explain variations in responses to particular questions by linking them to other characteristics of respondents.

Many sociologists of work analyze survey or interview data that they have designed and collected themselves. For instance, Moss and Tilly (2001), whose research is described at the beginning of this chapter, used surveys to understand how urban employers in four cities viewed the labor market, workers, and race. Members of their research team administered some of these surveys over the telephone, while others were administered face-to-face.

Secondary Analysis of Survey Data: Large-Scale Surveys of Work and Workers

It is not always necessary or desirable for a researcher to design and administer his or her own survey. Instead, many researchers analyze survey data that were collected by someone else. As we have seen, the U.S. government is a primary source of survey data on workers and work, and many sociologists rely on these data to answer their research questions. There are other large-scale surveys accessible to researchers, however. These are typically funded by U.S. government agencies or private foundations and often reflect their authors' interest in collecting in-depth data on a particular topic (e.g., workfamily relations).

For example, The National Survey of the Changing Workforce (NSCW), conducted every

five years by the Families and Work Institute, is an ongoing survey of a nationally representative sample of employed workers, focusing on both job conditions and respondents' family and personal lives (http://www.familiesandwork. org). The most recent wave of this survey was completed in 2002. Jacobs and Gerson's (2004) analyses of these data form the basis for their book on work and family, which we discuss in Chapter 15.

The National Organizations Survey (NOS), conducted in 1991 and again in 1996-1997 and in 2002 is another large-scale survey frequently analyzed by sociologists of work. The NOS contains data collected from a representative sample of U.S. establishments, with a focus on human resource policies and practices. The survey also includes data on many other characteristics of establishments, such as their organizational structures, workforce, performance, and locations (see Kalleberg et al. [1994] for examples of research analyzing 1991 NOS data).

The Science (and Art) of Asking Questions

Extensive research has been devoted to the wording of survey questions and possible responses. This research draws from many areas, including cognitive psychology, conversational analysis, and other studies of information processing (Schaeffer and Presser 2003). Studies address issues such as where and with what frequency a survey question should mention a reference period (last week, within the last six months, etc.), the most suitable response categories for particular questions, and whether and how to define behaviors and events for respondents. These efforts are directed toward one primary goal: to improve the validity and reliability of

BOX 3.2 From an Actual "Think Aloud" Interview to Determine Time Spent Working

"So, for last week, how many hours did you actually work in your main job?"

"I just figured this out for my time card. So, not including that one hour off and the nine hours off I think I worked like, 41 and a half, including that time off. So, minus 9, is 32. I think I worked 32 and a half—something like that. OK. Oh, God, and for XXX, oh my God. My schedule goes from Thursday to Wednesday, I need to fall back on. Let me do it backwards. Did I work Saturday? Yes, I worked Saturday? Sunday to Saturday or Saturday to Sunday? Sunday to Saturday. Saturday I worked from—6 to 10, and I worked Friday—no, Thursday—yes, I worked

12–4:30. Wednesday—yes, I worked—When did I work? I worked 5 to 11. And Tuesday, did I work? Nnnooo. Monday, did I work? Na, I volunteer worked that night. No, I didn't work. Sunday, did I work? Oh gosh, Sunday night, November—What day was that? November 24th. Gosh, did I work that day? I think I may have worked that day—What did I do? I watched the football game with XXX. We stayed over there until about—I don't think I did any work that day. So that's 4, 4 and a half, and 6, 10 and a half—I'll say 14 and a half hours."

Source: Robinson and Godbey 1997: 82.

survey data. Validity refers to whether a measure accurately reflects the concept it is designed to measure; reliability refers to whether the same measure used again and again in the same population will yield the same responses.

As in all areas of sociology, some concepts of interest to sociologists of work can be more easily measured through surveys than others. There are challenges in validity and reliability associated with measuring even the most straightforward concepts, however. For example, consider the issue of how many hours a person works. Knowing the answer to this question has drawn increasing interest from researchers, but is also a subject of great debate (Schor 1991; Robinson and Godbey 1997). U.S. government surveys regularly contain questions about work hours, and these data extend back to at least the 1940s (Robinson

and Godbey 1997). In its Basic Monthly Survey, the CPS asks people to estimate how many hours they actually worked at their main job in the previous week. Other surveys contain a similar question, usually asking people to think about their average, regular, or normal work hours or their hours worked in the preceding week.

This seems like a simple task. However, as Robinson and Godbey note, "[p]eople think they know how many hours they work—that is, until they actually try to figure it out" (1997: 81) (see Box 3.2). Response error occurs for several reasons: Respondents may not understand the time frame of the question; they may not know what counts as "work;" they may not remember accurately or be unable to sum up hours worked over multiple days; or they may over- or underestimate their hours work in order to present

BOX 3.3 Measuring Job Satisfaction

Here is an example of a global measure of job satisfaction. These questions are designed to tap people's overall assessment of their jobs. The items are highly general and thus could apply to almost any type of work. Developed by Quinn and Shepard (1974) and modified by Pond and Geyer (1991) and Rice et al. (1991), this measure includes six items, with the original wording in parentheses.

- (Knowing what you know now), If you had
 to decide all over again whether to take the
 job you now have, what would you decide?
 (Responses range from 1 = definitely not
 take the job to 5 = definitely take the job.)
- If a (good) friend asked if s/he should apply for a job like yours with your employer, what would you recommend?
 (Responses range from 1 = not recommend at all to 5 = recommend strongly.)

- How does this job compare with your ideal job (job you would most like to have)?
 (Responses range from 1 = very far from ideal to 5 = very close to ideal.)
- 4. (In general) how does your job measure up to the sort of job you wanted when you took it?
 (Responses range from 1 = not at all like I wanted to 5 = just like I wanted.)
- All (in all) things considered, how satisfied are you with your current job?
 (Responses range from 1 = not at all satisfied to 5 = completely satisfied.)
- 6. In general, how much do you like your job?
 (Responses range from 1 = not at all to 5 = a great deal.)

Source: Fields 2002: 13.

themselves in a particular way to the researcher (Robinson and Godbey 1997: 85). In light of these problems of both validity and reliability, Robinson and Godbey argue that estimates of working hours derived from government surveys are generally inflated relative to what is found when other methods are used to collect work hour data.

If a seemingly simple issue like the number of hours a person works is difficult to ask about on a survey, consider a slightly more complicated concept: job satisfaction. Every day thousands of workers are asked to report their level of job satisfaction. Most of the time they do so in response to internal surveys distributed at their workplace. Employers—and the human resource departments

that operate on their behalf—spend many hours attempting to gauge their workers' feelings about their jobs and companies. This research is conducted with the belief that satisfied workers are more productive employees, though studies show only a small positive relationship between these variables (George and Jones 1997).

Job satisfaction can be defined simply as "how people feel about their jobs and different aspects of their jobs" (Spector 1997: 2). It can represent a person's overall assessment of his or her job or a set of feelings about a job's different facets, such as pay, co-workers, supervisor, etc. Much effort has been devoted to creating valid and reliable measures of this concept. Box 3.3 describes one commonly used way to assess job satisfaction.

Job satisfaction is a useful concept for sociologists, in part because it is defined in such general terms, it is a question or set of questions that can be asked of virtually everyone who is employed, and it can be asked the same way from one decade to the next. This has enabled researchers to compare levels of job satisfaction across occupations and across time, thus yielding a systematic portrait of workers' feelings about their work and the ways these feelings are linked to other aspects of the job.

Job satisfaction is an attitudinal variable; that is, it taps workers' feelings about what they do. Surveys of workers also attempt to measure more objective characteristics of jobs. These include qualities such as the degree to which the work is routinized; how much control a worker has over his or her working conditions; the complexity of the job; and the nature of supervision. Concepts like these are typically measured by several survey items, which are later combined into a single scale. Although the items composing each scale may seem straightforward, each is the product of extensive testing and analysis, designed to maximize the measure's validity and reliability.

Sociologists have written survey questions attempting to measure countless other concepts relating to work and workers. In general, the more complex the concept, the more difficult it is to create valid and reliable measures. These difficulties lead some researchers to choose a different method for collecting their data, such as in-depth interviews or an ethnography. Alternatively, some combine surveys with one of these other methods. In fact, it has become increasingly common for researchers to use more than one methodology when studying a particular issue. This strategy enables them to offset the limits of one methodology with the strengths of another.

Methods for Studying Work and Workers: Ethnographies

Michael Burawoy's research in the Chicago machine shop, described at the beginning of this chapter, is an example of an ethnographic approach to the study of work. As the preceding discussion showed, U. S. government agencies have been collecting, analyzing, and disseminating quantitative data about the workplace for many decades. Ethnographers have also been studying work and workers for a long time; most trace the beginnings of ethnographic studies of work to the Hawthorne Studies of the 1930s (Burawoy et al. 2000; Hodson 2001).

Ethnographic approaches "are grounded in a commitment to firsthand experience and exploration of a particular social or cultural setting on the basis of (though not exclusively by) participant observation. Observation and participation (according to circumstance and the analytic purpose at hand) remain the characteristic features of the ethnographic approach" (Atkinson et al. 2001: 4-5). In contrast to survey data, which tend to focus on individuals or organizations as independent or self-contained entities, ethnographic data focus on individual or group behavior in context. Characteristics of the settings and situations where people interact and go about their daily life thus receive much more attention than in survey research.

In addition to focusing on the contexts where behavior occurs, ethnographic methods have other qualities that make them a valuable source of data on workers and the workplace. While survey researchers aim for large, representative samples and generalizability, ethnographers are far more interested in obtaining a close-up, detailed portrait of a very limited

number of work settings—perhaps as few as one. Ethnographers may spend weeks, months, or even years in a particular setting, which brings depth, nuance, and richness to their observations. Because ethnographers observe people in their natural environment, they are able to present their subjects' views in their own terms.

Hodson (2001) argues that this makes ethnographic approaches especially well suited to understanding workers' perspectives and opinions. Survey research is less useful for this purpose, because surveys are designed to collect information deemed important by researchers, not workers themselves. Smith (2001b) suggests that the value of ethnographic studies of work stems from their ability to shed light on important features of work, including "how routine jobs are complex; how complex jobs are routine; and how power, control, and inequality are sustained." Because ethnography involves direct observation, it is useful for understanding exactly how work is performed. As Barley and Kunda note, "most work practices are so contextualized that people often cannot articulate how they do what they do, unless they are in the practice of doing it" (2001; 81).

Ethnographers, as Smith notes, "cannot be accused of being armchair academics who examine the world at arm's length...By becoming paid workers, they have capitalized on an avenue into the research field—getting a job, learning by laboring—not readily available to researchers in other domains" (2001b: 220). Organizational or workplace ethnographies, in which researchers "observ[e] workers at their places of employment or even work...directly alongside them," have been conducted in many types of work settings over many years (Hodson 2001: 50). These ethnographies have provided sociologists with some

of their most significant insights into workers and the workplace.

Workplace Ethnographies Then and Now: From "Cow Sociology" to Making a Tip

The late 1920s and 1930s was the era of The Great Depression in the United States. The now famous Hawthorne experiments also took place during this time period. These experiments, relying as they did on detailed observations of workers on the job, are generally seen to mark the beginning of organizational ethnography as a tool for understanding the workplace.

The Hawthorne studies, to be discussed more fully in Chapter 5, represent a series of experiments performed at the Western Electric Works in Hawthorne, Illinois, by researchers associated with the Harvard Business School (Mayo 1933; Roethlisberger and Dickson 1939). The researchers' initial aims were to identify ways in which the design of work could be improved so as to reduce workers' levels of fatigue, monotony, and discomfort (Mayo 1933). Over the course of the experiments, however, researchers' interests shifted from job design to broader questions about workers' feelings about themselves and their work. Hence, what began as a study of environmental design and engineering became a study of social relationships-among workers and between workers and supervisors.

What is important to note here is that the Hawthorne studies were the first of many ethnographic studies of workers and their workplaces and that they shaped social research on these issues for years to come. These studies are noteworthy today for two primary reasons. First, the research inadvertently uncovered a phenomenon that has come to be known as the "Hawthorne effect." The Hawthorne effect

refers to the possibility that researchers' presence in a setting where a study is being conducted may influence the responses of research subjects. Workers in the Hawthorne plant responded positively to the researchers' presence; Mayo and his colleagues attributed their rising productivity to this attention from researchers (but see Whyte 1987 for an alternative perspective). Ethnographic researchers, whose methods of data collection and observation require them to interact with the subjects of their research, continue to face the challenge of avoiding the Hawthorne effect.

A second legacy of the Hawthorne studies concerns their approach to workers and the workplace. By focusing on workers as they engaged with one another on the job, these studies revealed the important role social relationships play in the workplace. This insight not only affirmed the value and necessity of ethnographic research, it also helped to shape sociological and managerial views of work for decades (Barley and Kunda 2001). Among sociologists, research on work groups and workplace cultures flourished throughout the 1940s and 1950s. A central thrust of these studies was the ways in which work group processes and norms shaped their members' attitudes and behavior. Researchers were especially interested in the informal systems of organizing that emerged on the job alongside of, and sometimes in opposition to, the formal structures of the workplace.

The influence of the Hawthorne studies extended beyond sociologists and social scientists, however. From these studies developed a view of good leadership as being as much concerned with "human relations" as with the technical or bureaucratic aspects of the task (see Chapter 5). Managers thus saw a very practical application

of the Hawthorne effect: People worked harder and more productively when they believed that their supervisors and employers were concerned about them. While these views about leadership, morale, and productivity have proven to be far too simplistic, the "human relations" approach—at least initially—had an important impact on managers' conceptions of their roles in industry (Perrow 1986).

This application of the Hawthorne studies was criticized by some sociologists at the time. These critics referred disparagingly to the Hawthorne researchers as "cow sociologists": "Moo, moo, moo say the cow sociologists" wrote Bell (1947: 88), alluding to a popular advertising campaign at the time in which a brand of condensed milk was sold as being especially tasty because it was produced by "contented cows." As Simpson explains, this research was also "sometimes denounced as managerial sociology-that is, as sociology done to help management" (1989: 567). Instead, some believed that the aims of social science should be to improve the quality of work life for workers. Needless to say, these issues—about the purpose and politics of social research—continue to be debated and raise important ethical issues concerning the uses (and possible abuses) of sociological research.

As the United States moved out of the depression and into World War II, ethnography continued to be the methodology of choice for sociologists studying the workplace. Although many of these studies focused on male workers in blue-collar factory jobs, these were not the only settings of interest to sociologists (Gubrium 2007). Other occupations studied included Donovan's (1929, 1938) studies of "salesladies" and schoolteachers, Gold's (1952) research on apartment janitors, Whyte's (1948) classic study

BOX 3.4 The Use of Deception in Research

- (a) Sociologists do not use deceptive techniques (1) unless they have determined that their use will not be harmful to research participants; is justified by the study's prospective scientific, educational, or applied value; and that equally effective alternative procedures that do not use deception are not feasible, and (2) unless they have obtained the approval of institutional review boards or, in the absence of such boards, with another authoritative body with expertise on the ethics of research.
- (b) Sociologists never deceive research participants about significant aspects of the research that would affect their willingness to participate, such as physical risks, discomfort, or unpleasant emotional experiences.
- (c) When deception is an integral feature of the design and conduct of research, sociologists attempt to correct any

- misconception that research participants may have no later than at the conclusion of the research.
- (d) On rare occasions, sociologists may need to conceal their identity in order to undertake research that could not practicably be carried out were they to be known as researchers. Under such circumstances. sociologists undertake the research if it involves no more than minimal risk for the research participants and if they have obtained approval to proceed in this manner from an institutional review board or, in the absence of such boards, from another authoritative body with expertise on the ethics of research. Under such circumstances, confidentiality must be maintained unless otherwise set forth in [previous sections of this Code].

Source: Code of Ethics, American Sociological Association, Washington, DC, 1999, Section 12.05, p. 14.

of the restaurant industry, and research on the military (e.g., Stouffer et al. 1949).

In general, the focus of ethnographic research has shifted over time in ways that parallel changes in the occupational structure. While many ethnographic studies have continued to focus on blue-collar jobs in factories (e.g., Burawoy 1979; Juravich 1985; Vallas 2003c), researchers have also turned their attention to the service sector (e.g., Paules 1991; Leidner 1993), the world of high-tech (e.g., Kunda 1991), and the ranks of professionals, managers, and other knowledge

workers (e.g., Pierce 1995). We will discuss many of these studies in forthcoming chapters.

Dilemmas of Ethnography: Access and Ethics

Survey researchers must grapple with wording questions in ways most likely to yield a valid response. Ethnographers do not face this challenge—because they interact extensively with their research subjects, these researchers have opportunities to learn how best to approach a particular topic. They can clarify their questions

and ask respondents to do the same with their answers. More important, because ethnographers can observe firsthand what goes on in the workplace, they do not have to rely so heavily on what other people say is occurring. The challenges faced by ethnographers are of a different sort and primarily involve the difficulties associated with gaining entry to work settings.

As Vicki Smith explains, "[g]aining access to American corporations to conduct research on work and employment relations has become a tricky enterprise" (2001b: 15). Organizational gatekeepers are often reluctant to open their doors to researchers because of worries about confidentiality or legal liability or a general fear about how the data are likely to be used. Given this, workplace ethnographers often spend considerable amounts of time and energy and endure multiple frustrating and self-esteem—deflating rejections as they attempt to gain permission to enter a worksite.

For instance, when Pierce approached law firms seeking permission to observe lawyers and their staffs on the job, this permission was denied: "My promise of confidentiality and my stated intent to be as unobtrusive as possible did little to assuage their fears. After several rejections, I realized that overt fieldwork was simply not possible" (1995: 18). Instead, she conducted her study as a "covert fieldworker." She worked as a paralegal in the litigation departments of two law firms and recorded her observations.

Researchers who observe covertly must abide by the American Sociological Association's Code of Ethics regarding deception in research (see Box 3.4). Deception of research subjects is considered ethical only under limited conditions. Most workplace ethnographers do not collect their data covertly (V. Smith 2001b).

Strengths and Limitations of Ethnographic Research

One of the most important messages of this chapter is that no single methodology is best for understanding workers and work. Every methodology brings with it advantages and disadvantages; most methodologies are better at answering some research questions than others. Ethnographies are no different in this regard. As noted above, ethnographic approaches can provide rich, detailed portraits of workers and workplaces. They are especially useful for capturing the social settings and situations of work as they exist naturally. By studying workers within the context of their jobs and workplace, ethnographers can provide information that is not accessible to researchers relying on largescale surveys or official statistics.

Another strength of ethnographies is the insight they provide into lower-level workers who may lack authority or power within the formal structures of the workplace. Decades of ethnographic research have shown how these workers engage one another on the job and actively participate in shaping their working conditions and lives.

The strengths of ethnographic research are counterbalanced by the limitations of this methodology. Ethnography is a time-consuming, labor-intensive, and exhausting method of data collection and analysis. These qualities deter some researchers. Because the collection of ethnographic data depends upon the researcher having direct access to settings and informants, this methodology may be less successful as a strategy for uncovering the activities, motivations, and actions of dominant groups, who may have the means and motives to shield themselves from researchers. In addition, as the examples discussed

in this chapter show, many ethnographic studies of work are case studies, meaning that they focus exclusively on one work setting. As a result, the results of ethnographic research are of limited generalizability. Ethnographies thus are most often used to generate concepts and hypotheses, rather than as a means to systematically test alternatives or discriminate among competing views (Hodson 2001).

In recent years, Hodson and his colleagues (http://www.sociology.ohio-state.edu/people/ rdh/Workplace-Ethnography-Project.html) have begun to treat the extensive ethnographic record on the workplace as a data source in its own right. These data are then analyzed quantitatively in ways designed to systematically test hypotheses about workers and their jobs. These efforts reveal the value of using multiple methodologies to advance understanding of workers and the workplace. As Hodson observes: "The study of the workplace is an intellectually vital field in part because it builds on many research traditions and methods of data collection" (2001: 272). Through rigorous use of existing methodologies and creative application of new approaches, researchers have been able to ask and answer many important questions about the workplace.

Methods for Studying Work and Workers: Experiments

Correll's (2004) research described at the beginning of the chapter provides an example of the experimental method applied to the study of work. Recall that her research examines the ways in which cultural beliefs about gender differences in task performance shape women's and men's occupational goals and achievement expectations. Experiments, in Babbie's words, involve

researchers "select[ing] a group of subjects, do[ing] something to them, and observ[ing] the effect of what was done" (2004: 221). Correll's experiments were conducted in a laboratory. Her subjects were male and female college students; they were given information about a (fictitious) task ability and then filled out questionnaires designed to assess the effects of exposure to this information. The questionnaires asked subjects to provide a self-assessment of their task ability, an ability standard for judging themselves to have high ability, and their emerging aspirations related to the task ability.

Another feature of the experimental method exhibited by Correll's study is the use of experimental and control groups. The experimental group is the group of subjects who receive the stimulus; in Correll's research, the stimulus was information about the fictitious ability that linked it with gender. In particular, some of her male and female subjects were told that males, on average, perform better on the test than females. Experiments must also have a control group that is, a group that does not receive the stimulus. In Correll's study, the control group was represented by the subjects who were told that there was no gender difference in the fictitious ability. With the exception of the information that either linked the task ability with males or explicitly disassociated it with gender, all other information given to the control and experimental groups was exactly the same. This includes other information about the task as well as each subject's (fictitious) score on a test designed to assess task ability.

Because the experimental group is the only one receiving the stimulus, they should respond differently to the items contained in the questionnaire, compared to the control group. Determining whether this is the case is the way in which researchers assess the effect of the stimulus. In principle, the only difference between the experimental and control groups is the former group's exposure to the stimulus. Hence, when the groups' results differ significantly, researchers conclude that the stimulus had an effect.

Correll (2004) found strong support for her hypotheses. When women and men believed that men, on average, performed better than women on tasks requiring the fictitious ability, men rated their own abilities higher than women and reported more interest in careers requiring this ability. By contrast, among the control group where women and men were told that there were no gender differences in the fictitious ability-Correll found that women and men did not differ in either their assessments of their performance or their aspirations. In this way, Correll's experiment demonstrated that when tasks or abilities are linked to cultural beliefs about gender differences, these beliefs shape women's and men's assessments of their abilities and their career aspirations. She expects that these processes also operate outside the laboratory in real-world situations as women and men make educational and occupational choices.

Because experimental designs aim to identify one particular effect, while holding constant all other factors, experiments are often conducted in laboratory settings. The benefits of this approach stem from the researcher's ability to control many aspects of the research. Correll (2004), for example, precisely controlled the information her subjects were exposed to, thereby insuring that all subjects received the same information about the fictitious ability and its links to gender. While it is impossible to account for the effects of all extraneous influences, laboratory conditions

typically facilitate this goal better than natural settings.

Laboratory settings also have some drawbacks, however. No matter how carefully the experiment is designed, a laboratory setting is always artificial (Babbie 2004). Whether subjects would respond the same way outside the laboratory as inside is always a question. Undergraduate students may be better subjects for experimental research on some kinds of topics rather than others. For example, undergraduates might not be the most suitable subjects for experiments that simulate the hiring process for high-level jobs. Here, students' lack of direct exposure to these kinds of jobs and work situations is likely to limit the external validity of the results. Although laboratory experiments are a valuable methodology, they are not well suited to many of the research questions of interest to sociologists of work.

Another type of experiment is one done "in the field"—outside the laboratory. Field experiments avoid the artificiality of those performed in the laboratory using undergraduate research subjects. In the social sciences, field experiments have played an especially valuable role in uncovering racial (and, to a lesser extent, gender) discrimination in housing, treatment of customers, and employment (Guion 1966; Boggs, Sellers, and Bendick 1993; List 2004; Bertrand and Mullainathan 2004). The results from these studies not only have had intellectual value, but have been used by the courts in discrimination cases.

Discrimination is an extremely difficult concept to measure. Not only are those who practice discrimination unlikely to admit it if asked on a survey or in an interview, but people who themselves have been discriminated against may not know that this has occurred. Applicants for a job

almost never know who all of their competitors are, nor do they know how their qualifications have been assessed relative to others. Field experiments (sometimes called "audits"), where job applicants and their qualifications are manipulated by researchers, are ideal for investigating these practices.

An interesting example of a field experiment is Bertrand and Mullainathan's (2004) study of racial discrimination in employment. These researchers (economists) submitted fictitious resumes in response to job ads placed by employers in Boston and Chicago. The resumes were randomly assigned African American—(e.g., Lakisha or Jamal) and white—(e.g., Emily and Greg) sounding names. Resumes with white-sounding names attached received 50 percent more callbacks than those with African American-sounding names. These differences were found regardless of the occupation, industry, and size of the employer. In light of these findings, Betrtrand and Mullainathan (2004) argue that better training programs for African Americans may not do much to reduce racial disparities in employment.

Other field experiments dealing with this topic have sent pairs of "testers" (also referred to as "auditors") into the field to apply for jobs (Bendick, Jackson, and Reinso 1994). Testers are carefully trained beforehand and are matched on all job-relevant criteria (e.g., education, experience), differing only in race or ethnicity (or gender). Examining how far each tester progresses in the job-application process allows researchers to not only identify the extent of employment discrimination, but also better understand how it is expressed. These studies thus reveal an important role for experiments in the sociology of work.

Of all the methodologies discussed in this chapter, experiments are used least often by

contemporary sociologists of work. There are at least two reasons for this. First, laboratory experiments are most useful for exploring psychological or social-psychological questions. While some sociologists of work are interested in these issues, they account for only a small part of what sociologists of work find most compelling. Not surprisingly, experimental designs appear much more frequently in the psychological literature on work, reflecting the different emphases of these two disciplines. A second reason was mentioned earlier: The value of laboratory experiments as a means of data collection for sociologists of work is limited when undergraduate students are the only available research subjects.

Summary and Conclusion

This chapter examined the methodologies sociologists use to study workers and the workplace. As we have seen, these methodologies are as diverse as those applied to the study of any other area of social life. We focused particular attention on four methodologies: official statistics, surveys, ethnographies, and experiments. Each has its own set of advantages and disadvantages as a tool for studying workers and the workplace. The choice of methodology depends in part on the research question, but it also depends on other more practical considerations, such as the research budget and time frame.

It is important to understand that these are not methodologies used only by sociologists interested in workers and work. For example, Max Weber, one of the earliest sociologists of work—and an important sociological theorist more generally—relied on comparative historical methods to understand the ascendance of capitalism in the West (Weber 1949 [1905]). Today,

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comparative historical sociologists interested in work continue to explore these issues and those relating to the development of a global world economy (Mahoney 2004). At the "micro" end of the methodological spectrum, some sociologists of work are beginning to use "experience sampling" as a methodology for understanding

how people feel about and respond to particular moments in daily life, from hour to hour during the day, at work and at home. Just as changes in the world of work create new topics and issues for researchers to explore, sociologists are always looking for new ways to answer the research questions that inspire their work.