2 Occupational Health
A Social Perspective

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Why should scientists and health professionals concern themselves with the social and political context of occupational health and safety problems? Is it not sufficient to learn about the characteristics of risk factors, the diagnosis of occupational disease, and technical approaches to prevention?

- There has been evidence for centuries about the health hazards of lead. Why are workers and children poisoned by lead exposures?
- Pesticides are designed to kill pests, but they are also toxic for other living things. Why do we know so little about the human health effects of most pesticides in use today?
- The textile industry has been the leader of the Industrial Revolution throughout the world. Why did byssinosis, a respiratory disease of cotton mill workers go unrecognized in the United States until the late 1960s?
- Asphalt fume has been identified as a carcinogen in Denmark. Why is it regulated in the United States not as a carcinogen, but only as an “air contaminant?”

- A major transnational automobile company has clear internal guidelines for reviewing possible equipment purchases to prevent hearing loss among its employees. Why are these guidelines ignored by plant managers?
- There is less full-time work, more temporary work, more work speed-up, and more shift work, all of which increase physical and psychological health problems. Although there are scientific and technical aspects of this situation that are worth studying, are the solutions solely scientific and technical?
- When hazardous technologies and hazardous substances find their way to developing countries, after being prohibited from use in the developed countries where they originated, what kind of solutions are available?
- What can economically challenged workers or countries do when confronted with the choice between jobs or health?

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The effective understanding of workplace injury and disease requires a full comprehension of the nature of work and the social, political, and economic context of the workplace. Work is a necessary human activity.

People work to survive, yet work is more than a way to gain an income. Work provides a host of rewards and problems: it can be laborious and numbing, stimulating and satisfying, frustrating and demeaning. All too often it is dangerous and unhealthy.
Work occupies a central place in most people's lives, but the overall context of work is often ignored or poorly understood. To recognize and prevent work-related disease and injury requires that health care providers and other health and safety professionals appreciate the full context of work and workplaces in the world today. This chapter focuses primarily on the U.S. experience, although parallels to other countries are drawn when possible. It is believed that many of the underlying issues being addressed here cross national boundaries. Before we discuss the current situation, we review some history.

A SOCIAL AND POLITICAL PERSPECTIVE ON THE HISTORY OF OCCUPATIONAL HEALTH AND SAFETY

Occupational health has rarely received much attention in most societies. Historically, our commitment to economic advance through technology has made us blind to its toll on workers' health. Workers have been engaged in the more pressing task of making a living for their families to pay too much attention to widespread occupational safety and health problems. The labor movement in the United States has not been strong enough to force public attention to these issues on a continual basis. As a result of a number of interrelated historical and ideological factors, relatively little attention has been paid until recently to the problem of occupational illness and injury in the United States.

In most countries, the process of industrialization that resulted in the creation of the factory system radically changed people's experience of work. Forced by economic necessity into the newly created factories of the machine age, workers found themselves controlled by bosses whose sole concern was the maximization of profit. Working in large-scale plants and using the new technology of modern industry, workers confronted a whole new set of conditions; powerless and tied to the speed of the machine they served, facing the ever-present dangers of physical injury from conveyor belts and speeding looms, and exposed to a range of dyes, bleaches, and gases—for workers, the workplace had become a source of injury, disease, disability, and death.

With the help of social reformers and professionals, workers, newly organized into unions, fought back against these conditions in countries such as Britain and Germany in the middle and end of the 19th century, and they were somewhat successful in improving conditions through government regulation. Laws restricting working hours and the employment of women and children, and promoting protection against safety hazards and some hazardous chemical exposures, increased. A system of factory inspection was established in Britain by the mid-19th century, and Germany moved to control working conditions by the beginning of the 20th century. In Europe, these efforts built on an earlier tradition of occupational medicine, an acceptance of government intervention and paternalism, and a relatively powerful workers' movement. By the 20th century, workers and unions had achieved political representation in the form of labor, socialist, or social democratic parties. This gave workers powers to demand reform and was a major factor in establishing laws to improve working conditions.

In the 19th century, the Industrial Revolution brought to the United States, as it had to Europe, many safety problems and a level of public concern about these problems. Massachusetts created the first factory inspection department in the United States in 1867 and in subsequent years enacted the first job safety laws in the textile industry. The Knights of Labor, one of the earliest labor unions, agitated for safety laws in the 1870s and 1880s. Social reformers and growing union power did gain, by 1900, minimal legislation to improve workplace health and safety in the most heavily industrialized states. The regulations and the system of inspection were, however, inade-
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quate. Those states that had some legislated protections rarely enforced them and focused largely on safety issues; little was done to protect workers from exposure to the growing number of chemicals in the workplace.

After 1900, the rising tide of industrial accidents resulted in passage of state workers' compensation laws, so that by 1920 virtually all states had adopted these no-fault insurance programs. Britain had passed its Workmen's Compensation Act in 1897 for occupational injuries, and occupational diseases were added in 1906. Germany, too, had a system of compensation in place by the turn of the century.

Throughout the 1920s in the United States, the rise of company paternalism was accompanied by the development of occupational medicine programs. Much attention was paid to preemployment physical examinations rather than to industrial hygiene and accident prevention. Occasional scandals reached the public eye, like cancer in young radium watch dial painters. However, it was not until the resurgence of the labor movement in the 1930s that there was important national legislation: the Walsh-Healey Public Contracts Acts of 1936 required federal contractors to comply with health and safety standards, and the Social Security Act of 1935 provided funds for state industrial hygiene programs. During this period, the Bureau of Mines was authorized to inspect mines; this helped to a minimal extent to improve working conditions in the mining industries.

The mobilization for World War II required that the U.S. government become involved in the organization of production. Concern for the health of workers increased during this period because a healthy workforce was considered indispensable to the war effort. However, after the war, health and safety receded from public attention. An exception to the general neglect of the field was passage of the Atomic Energy Act in 1954 which included provision for radiation safety standards.

Not until the 1960s, when labor regained some political clout under the Democratic administrations of Presidents Kennedy and Johnson, did the issue reemerge as significant. Injury rates rose 29% during the 1960s, prompting union concern, but it was a major mine disaster in 1968 in Farmington, West Virginia, when 78 miners were killed, that captured public sympathy. In 1969, the Coal Mine Health and Safety Act was passed and, finally, the first comprehensive federal legislation to protect workers was created when the Occupational Safety and Health Act (OSHA) became law in 1970.

This brief history illustrates just some of the dimensions of the struggle to provide a safe and healthful workplace. Although many countries provide regulatory protection for workers and unions often demand safe working conditions through collective bargaining agreements, the problems facing workers have increased. New chemicals in the workplace, limits in regulatory enforcement, and the demands of an increasingly competitive global economy exacerbate the need to maintain and improve working conditions.

These problems are global in scope. The globalization of production, trade, and consumption has resulted in occupational and environmental safety and health problems becoming ubiquitous. Workers in developing and newly industrialized countries now face a range of workplace hazards. Stricter environmental regulations in the industrialized countries make it attractive for companies to use countries in Latin America, Asia, and Africa as dumping grounds for toxic waste and as places to export highly toxic substances and hazardous industries.

Perhaps the most pressing problems in occupational health stem from the increasing integration of the world economy. In North America, the development of continental free trade may threaten the more advanced work environment standards of Canada and the United States, while bringing many new hazards to Mexico. In Europe, integration has made the movement of capital and labor across borders much easier; industries can
move to countries with less strict occupational and environmental standards. In some cases, this intrusion has led to threats to worker and environmental health; in others, the more advanced standards of some countries are being imposed on the less advanced, improving working and living conditions. In both situations, conflict over standards has arisen. The export of hazardous technologies, hazardous products, and hazardous wastes poses increasing challenges to public health worldwide. On the one hand, our understanding of the nature of health hazards to workers has been improving; on the other hand, however, the restructuring of the world economy may undercut the political will to control these hazards.

THE GLOBAL CONTEXT OF OCCUPATIONAL HEALTH

The magnitude and pattern of occupational disease and injury in a particular society are strongly affected by the level of economic and technological development, by the societal distribution of power, and by the dominant ideology of a particular social and political system. These factors bear on the way in which diseases and injuries are “produced,” on the recognition and prevention of these problems, and on the extent to which workers receive compensation for them. Fully understanding occupational injury and disease requires, therefore, an understanding of the broad context in which production takes place. This context includes the economic and technological basis of production, ideological and cultural factors driving the design and organization of work and the workplace, and the main social actors in decisions that affect the work environment.

The Social Actors in Occupational Health and the Role of Ideology

The medical/scientific model focuses on disease and injury causation, using scientific methods to discover, explain, and solve problems in the work environment; it rarely ad-

The structure in Fig. 2-1 suggests that the key relationship for understanding the work environment is a “triangle” of control: workers, any potential hazards, and management—and its dominance of the workplace. This relationship exists in a historical and ideological context, influenced by a number of other institutions and individuals. These actors include professional consultants, universities, and research institutes that typically provide scientific information about workplace hazards and how to control them. These research institutes may or may not work in collaboration with government; government, however, plays a key role in provid-

FIG. 2-1. Actors in occupational health.
ing and initiating research about work environment hazards in most countries. More specifically, government typically sets and enforces occupational safety and health standards.

Insurance companies are also key actors. They provide the economic context in which firms obtain workers' compensation insurance and may, by "experience rating" premiums, encourage firms to improve health and safety conditions. Unions project the collective strength of organized workers. They negotiate working conditions and may provide a counterweight to management's prerogatives. Many unions in the United States have their own health and safety staff to provide information and services to workers and workers' representatives. They also push government to act on workplace hazards by lobbying for establishing and enforcing regulations.

The organization of work and the roles played by key actors are deeply influenced by ideology—a set of beliefs, norms, and values. Ideologies of workers, managers, government officials, scientists, and others reflect what they think about society and about themselves. Ideologies also reflect what they expect from work and from employers, government, and each other.

A capitalist, free-market economic system incorporates presumptions about human behavior that most people have come to accept: notions about individual "choice" and "rights" and a belief in the primacy of private property and the efficiency of markets. Americans, in particular, are deeply suspicious of government. It is, therefore, necessary to examine the role of ideology to identify the assumptions that determine power relations in the workplace and how they are reflected in the problems of occupational health and safety.

The typical workplace in the United States is organized hierarchically. In large workplaces, the model is owner or owners at top, followed by leading managers, supervisors, and then the workers. Smaller workplaces compress this structure. The hierarchy reflects the distribution of power; owners and managers have complete control over investment decisions, the budget, the structure of production, what is produced, how and when production occurs, and hiring and firing of workers, and ultimately control the conditions of work.

Labor unions, considered to be a counterweight to this power, have had some success in gaining better wages and working conditions. They have usually been constrained, however, by a number of factors: the strength of the general economy, the level of unemployment, their own economic and political strength, and an ideology that supports the rights of property. Labor's achievements have also depended importantly on the level of government support for protecting and promoting the rights of workers.

In Europe, although the rights of private property remain relatively sacrosanct, the power of unions and workers' parties, as well as the acceptance and expectation of government regulation of working conditions, has led to a greater ability by government to regulate private industry and working conditions than is found in the United States.

The culture of most liberal democracies, including the United States, has supported belief in the rationality and apolitical nature of science and technology—a belief that social and public health problems (indeed, most societal problems) are amenable to technical solutions. Remarkably enduring has been the ideology of the "technical fix," and the notion that science can be separated from politics and from issues of power and control.

**Economic and Technological Development**

Changes in the national and international economic order—growth of new markets and the disappearance of old ones, new technologies, new competitors, demographic shifts, and shifts in investment—all directly affect the structure of production and work.

In contrast to the 20 years after World
War II, when American economic power was at its peak, the United States now faces fierce competition in heavy manufacturing, in the service sector, and in high-technology production. By 1970, the United States found itself confronting a new and highly competitive world economy in which American goods and American companies no longer dominated. In addition, multinational corporations based in Europe and the United States began to spread their activities across the globe, setting up production facilities in many developed and developing countries. These multinational corporations invested heavily abroad, seeking new markets and new places of production with lower wages, less regulation, and less taxation. Aided by new communications systems and new opportunities for investment, industry and investment capital have become increasingly mobile. This situation undercuts the ability of advanced industrial countries to regulate domestic industry for fear that industry might flee regulation. At the same time, it spreads hazards, some of which are associated with advanced technologies, to countries without the social or scientific infrastructures to protect their citizens.

Some particular economic developments have led to this situation, such as the major increase in oil prices by the Oil Producing and Exporting Countries (OPEC) in the 1970s, which led many developing countries to borrow heavily to buy oil. This resulted in a vicious cycle for these countries, involving the siphoning off of domestic savings to service the debt, domestic austerity programs imposed by institutions such as the World Bank and the International Monetary Fund (IMF), and a shift to export-oriented production. As a consequence, developing countries increasingly had to accept foreign investment and foreign technologies to survive. At the same time, the dire economic situation in these countries forced many of their most productive and mobile citizens to migrate to other countries in search of work, often at substandard conditions, in Europe and elsewhere.

By the end of the 1980s, the world economy had undergone a fundamental realignment, with four major effects on the United States and developed countries of Europe:

1. Their economies shifted from heavy manufacturing (of chemicals and steel) toward the service sector (banking, insurance, food service, and clerical work). American businesses lost approximately 38 million manufacturing jobs during the 1970s and 1980s (1).

2. Their economies became dominated by extremely mobile and mostly large international corporations.

3. In the United States, ownership of industry became concentrated in a smaller number of very large firms. The frequent buying and selling of companies during the 1980s and 1990s led to the U.S. economy coming increasingly under the control of the banking and finance sector.

4. With decreasing profitability, management in the United States could not afford, and was not willing to accept, the "social contract" with labor—a commitment to maintaining decent wages and working conditions in return for some job security and rising standards of living for most workers, a contract that it had maintained for most of the period since World War II. Companies tried to cut the costs of production by demanding reductions in wages or benefits, and they fought health, safety, and environmental regulation. In Europe, similar economic changes ushered in a period of political conservatism, resulting in the deregulation of the market and reduction in government control over private industry.

All this had an impact on workers; for example, in the United States, real average wages were $9 per hour in 1973 and $8 per hour in 1998 (2). Housing, education, and medical costs have all increased at a rate of approximately 9% faster than inflation over this period. Despite more two-earner fami-
lies, American workers are much worse off than they had been in 1970.

As the 1990s drew to a close, globalization continued to be the major factor in the social and economic life of all countries. Despite the return of left-leaning parties in much of Western Europe, and one of the longest economic boom periods in the United States in recent history, workers everywhere still struggle to maintain their standards of living. The collapse of many of the Southeast Asian economies in the second half of the decade, the chronic high levels of unemployment in Europe, and the continued economic slump in Japan are in stark contrast to the economic growth of the United States. But the consequent shrinking of world markets poses an enormous threat to U.S. economic prosperity and can only exacerbate the record levels of social and economic inequality still painfully evident in the United States. In addition, pressure to adopt neoliberal policies (reduced public spending, weakening of government regulation, privatization of state industries and services, and the virtual eradication of social welfare spending), imposed by the domination of American-led free-market ideology and orchestrated through the activities of international organization such as the IMF and the World Trade Organization, place a heavy burden on workers everywhere. In short, global economic and technological change continue to transform the workplace.

Management Theory and the Structure of Work

Although under attack and reconsideration in recent years, the general tendency in management theory from the time of Adam Smith, the father of economic liberalism, to the present has been to divide work into ever more discrete units to increase productivity, cheapen the cost of labor, and increase management’s control over the labor process (Fig. 2-2). This quest for “efficiency” became more self-conscious and explicit in the early 20th century with the work of such promoters of scientific management as Frederick Winslow Taylor (3,4). In Taylor’s view, the worker should be treated not as a whole person but rather as a collection of machine-like movements: walk, bend, grasp, sit, depress typewriter key. Such motions can be analyzed, timed, and reassembled into a program for maximum productivity. This “scientific” approach to management was widely accepted, both in capitalist and noncapitalist economies. Taylorism’s impact is well illustrated by the following comment by an automobile assembly line worker (5):

My father worked in auto for 35 years and he never talked about the job. What’s there to say? A car comes, I weld it; a car comes, I weld it; a car comes, I weld it. One hundred and one times an hour . . . . There is a lot of variety in the paint shop . . . . you clip on the color hose, bleed out the old color, and squirt. Clip, bleed, squirt, think; clip, bleed, squirt, yawn; clip, bleed, squirt, scratch your nose. Only now the [company has] taken away the time to scratch your nose.

Taylorism had a wide-ranging impact on the quality of work life. It meant the separation of conception from performance and the division of performance into multiple repetitive tasks. The intrinsic satisfaction of
"work," craftsmanship, and the ability to take pride in the whole finished product necessarily diminished. Employers increasingly relied on supervisory hierarchies and monetary rewards and punishment, such as piece rates and bonuses, to motivate workers in a carrot-and-stick fashion (5):

You're too busy to talk. Can't hear. They got these little guys coming around in white shirts and if they see you running your mouth, "This guy needs more work." A lot of guys who've been in jail they say you don't work as hard in jail. They say, "Man, jail ain't never been this bad."

Another profound influence on modern production and the workplace has been the rapid increase in the use of chemicals, especially since World War II. There are currently 70,000 chemicals in use in the United States, with 1,000 new chemicals introduced each year (6) (Fig. 2-3). A similar number of chemicals and chemical processes exist in most of the industrialized world, and increasingly so in developing countries as production is shifted to them. Most of these chemicals are unregulated and their human health effects unknown. They are used in a variety of production settings to produce a wide range of products, but they are also encountered in a range of occupations not traditionally considered dangerous. From typists and stockroom workers to janitors and artists, workers confront some potentially toxic chemicals on a daily basis.

Technology has increased the speed of production enormously, putting greater pressure on workers to perform rapid and repetitive motions that are damaging to mental and physical health. Stress and related psychological and physiologic illnesses are increasing in industrialized countries, including the United States, as the pace of work and life increases, as well as pressures to work longer hours to compensate for falling wage rates and a declining standard of living (7). In some countries, however, such as those in Europe, because of historical and cultural reasons and pressure from powerful trade unions, a shorter work week with reduced working hours has been adopted since World War II. More recently, unemployment pressures have furthered the call for a shorter work week (8).

With speed-up has come automation. Apart from obvious physical hazards associated with use of robots, robotic systems, and highly automated machinery, automation also eliminates jobs and de-skills others, leaving fewer workers responsible for complex systems. With the help of automation, one worker can do a job that may have required 10 workers before. This advance, however, has been accompanied by greater stress and, in general, more overtime work. Under these circumstances, rather than achieving its promise replacing grueling, mindless labor, automation has resulted in more stress, longer hours, and overwhelming responsibility at work (9).

Economic and technological changes go together. The spread of new technologies, the globalization of the world economy, and vast changes in the international division of labor both directly and indirectly affect not only the work environment, but general power relations in society. Class, race, and gender are key dimensions in the power relationships in the United States that shape...
substantial aspects of the work environment.

The Distribution of Power

Societies are composed of classes, of income groups, of sects and sectarians, of minorities and majorities, with varying degrees of power and influence. The distribution of power and influence is another essential factor shaping the work environment. In the most simple formulation, there are “workers” and “owners.” In advanced industrial societies, such a formulation cannot capture the complex features of the contemporary class system.

In such societies, a middle stratum has developed that is composed of independent professionals, an enduring class of small business owners, and a growing group of government employees with a wide range of social functions and with their own roles, interests, and power. The varying degrees of political power among lower, middle, and upper classes set limits on what can happen in a particular workplace or a particular industry.

Social class and class-based assumptions have been widely discussed from a variety of perspectives: sociologic, economic, and political. Class is clearly related to family background, level of education, occupation, and a variety of cultural factors. The lower a person’s social class, the less likely he or she will have a range of educational and employment options. Class determines levels of material well-being and health. Because class influences employment options, it affects the probability of becoming ill or injured at work.

Impact of Racism

In the workplace and in society as a whole, racism plays a role in determining who does what job, how much he or she will be paid for it, and what alternatives are open. For most of its history, the United States has depended on minorities to do the least desirable and dangerous work. Immigrant and minority communities have been the major sources of labor to build the railways, pick cotton and weave it in the mills, work in the foundries in the automobile industry, run coke oven operations in the steel industry, sew in the sweatshops, and provide migrant agricultural labor (Fig. 2-4). Minorities are still overrepresented in the most hazardous and least desirable occupations (Fig. 2-5). Minority workers may leave a hazardous work environment only to arrive home to a hazardous community environment. Since the early 1980s, in the United States, scientific evidence has increasingly pointed to discriminatory environmental practices of certain industries, of state and local govern-
ments, and in some instances, of the federal government. One well-documented example is that minority communities experience a disproportionate number of toxic threats to health (see Chapter 3) (11).

A social system with strongly racist elements bars members of minority groups from significant positions of power and, consequently, elevates the concerns of dominant racial or national groups. For example, one of the essential reasons for the lack of attention to hazards faced by farm workers in the United States (most of whom are African-American or Latino) is their relative lack of power in the American political system.

Impact of Sexism

Any discussion of power relations must include the situation of women, whose experience of work is in general different from that of men. Most obviously, this is reflected in the wage differentials paid to women for comparable work. Despite a political and legal commitment to equality in the United States, as of 1998, women were earning 74 cents to every dollar earned by a man, and the gap widens as one goes up the career ladder (12,13). African-American women and Latinas earn only 50% of white men’s pay (see Chapters 36 and 37) (13).

Even though women frequently work outside the home for as many hours as their spouses, domestic duties are rarely shared equally. Working mothers sleep less, get sick more, and have less leisure time than their husbands. One study finds that women who are employed full time outside the home and whose youngest child is less than 5 years of age spend an average of 47 hours per week on household work, whereas their male counterparts spend a mere 10 hours (14). Although the situation may have improved somewhat over the last 10 to 20 years, the stress and fatigue from balancing work life and home life remain a serious problem. The average working woman puts in an estimated 80 hours a week in both job and household work, and up to 105 hours if she has sole responsibility for children.

Women are also the main targets of sexual harassment at work. Any unwanted verbal or physical sexual advance constitutes harassment, and this can range from sexual comments and suggestions, to pressure for sexual favors accompanied by threats concerning one’s job, to physical assault, including rape. Studies indicate that 40% to 60%
of women have experienced some form of sexual harassment at work (15). An estimated one-third of the largest 500 companies in the United States spend approximately $67 million in dealing with sexual harassment (15).

Gender relations have political, and hence work environment implications. Cultural assumptions about gender can have a strong impact on the distribution of power in society. A strongly patriarchal society that bars women from positions of power is also likely to have a profoundly sex-segregated labor market. As a result, sexual harassment and occupational health in female-dominated re-trade jobs may not be considered important.

Thus, in addition to the development of market, the level of technology, ideological considerations, and changes in the global economy, power distribution related to class, and gender constitutes the framework which the actors in an industrial system attempt to create a “web of rules” governing the work environment. Management, labor, and government are constrained in their behavior by these broad social-environmental factors.

THE MICROCONTEXT OF OCCUPATIONAL HEALTH: LABOR-MANAGEMENT RELATIONS

The First Key Actors: Workers

Hundred years ago, when a cobbler woke up in the morning, the decision to make shoes or shoes, to buy hides, or to take some horse wares to the neighboring town was his control. If the cobbler acquired an injury to a certain polish or was told that it caused cancer, he could choose not to use it. If he found that carving heels bothered his elbow, he could do a few every other day instead of spending a long stretch of time on a bothersome or painful task, or he could try redesigning the tools or using alternative carving methods that might be better for him. He was his own manager. He set the pace and conditions of his work.

Contrast the cobbler’s situation with the working lives of most people today. These options are not open to modern-day shoemakers, or to nurses, auto workers, bank tellers, or employees in countless other occupations. Management controls the work environment; the hours of work, the pace, the tasks, the tools, and the technologies are all determined by someone other than the worker.

In addition to the detrimental effects of lack of control, which by itself causes stress (see Chapter 21), workers’ interests conflict with those of management. Management’s goal is to maximize profit; labor’s goal is a fair wage for a fair day’s work. Expenditures on health and safety are often seen by management as limiting profit. As a business school textbook advises (16):

In making decisions about their workplace, managers have two choices. They can remedy health and safety problems or they can provide risk compensation to workers. If reducing risk is less costly than the additional compensation, then working conditions will be improved. However, if the marginal cost of worker compensation is less than the marginal cost of safety improvements, then the firm will choose the compensation alternative. This outcome represents an efficient allocation of resources in that the firm minimizes its total costs.

Although one would hope that the conscience of managers will go against their training and the incentive system in their businesses, history has shown that it is unwise for workers to depend on the benevolence of management. The sociopolitical structure provides only weak motivation for management to construct a safe workplace. Government regulations exist but they are not always enforced, which is not surprising given that current Occupational Safety and Health Administration (OSHA) resources would allow the federal government to inspect each of 6 million workplaces once every 84 years (17).

Labor-management relations may be particularly problematic when jobs are pitted against improving occupational or environ-
mental conditions. The most frequent example of this contradiction occurs under conditions of "job blackmail," a colloquial term for the problem created when workers are forced to choose between remaining in a hazardous job or finding employment elsewhere (18). Examples include employers who threaten to fire workers or relocate the plant if workers or regulatory agencies try to impose controls over hazardous production. Job blackmail is found more often in those workplaces where workers have little or no power of control over their jobs as well as in workplaces that are not unionized. Although not unique to minority workers, job blackmail takes a heavy toll on them, because they are more likely than nonminority workers to hold hazardous jobs. Although job blackmail may occur in a variety of direct and indirect ways, the end result is to force workers to choose between being employed or not.

In job blackmail the choices are seldom, if ever, favorable to the worker. The worker who chooses to remain on a hazardous job may, in the short term, avoid unemployment, but may seriously jeopardize his or her future health and safety. The worker who chooses not to question "unfair" compensation will continue to receive a paycheck but will still earn less than she or he is worth. The worker who chooses not to unionize may remain employed, but will likely remain employed in an unjust, unsafe, and unhealthful workplace. Even in those situations in which a worker remains on the job, she or he may be labeled a troublemaker and ostracized to the point of quitting the job anyway (Box 2-1).

Although unions are a force in spurring companies to attend to health and safety problems, typically through collective bargaining agreements or, where they exist, union-controlled health and safety committees, and government regulation provides a further stimulus, there are two other motivational sources for improving health and safety: (a) corporate reputation ("public relations"), which functions to press management not to appear negligent in its provisions for workplace safety (although this tends to function more effectively for pollution problems and environmental concerns and, more often, in large corporations); and (b) the cost of replacing labor. If a company has invested in developing a skilled and loyal workforce, it is unlikely to want to damage that investment by exposing workers to dangerous conditions. This factor helps to explain why low-skilled, easily replaced workers, such as migrant laborers or poultry workers, are so vulnerable (Fig. 2-6).

The Changing Structure of Work

The economy of the United States and many other developed countries is changing rapidly. The shift from heavy manufacturing toward the service sector affects the structure of work and the work experience for many Americans. In general, in service industries, the most rapidly growing sector of the econ-

FIG. 2-6. Nonunion demolition worker in East Africa. (Photograph by Barry S. Levy.)
Box 2-1. History of a Secondary Lead Smelter in an Urban Environment

A small smelting company made news in the early 1980s after OSHA charged the company with administering chelating drugs to employees to lower the level of lead in their blood. The small scrap recycling company, located in Massachusetts, was charged with illegally providing these lead-purging drugs to employees while they continued to work in a lead-contaminated environment. After the administration of these drugs, two employees became severely ill. One had kidney failure and was ultimately diagnosed with kidney cancer. The other employee died; lead poisoning was listed as a significant contributing factor on his death certificate.

Although OSHA cited the company for many serious violations of standards, the fines and some of the charges were significantly reduced after negotiation. The company agreed to clean up the plant and reduce employee lead exposures.

Ten years later, however, not much had changed. One of the first reports of multiple poisonings in a single workplace listed in the state’s new adult lead poisoning registry came from employees of the smelting company. Every “shop floor” employee was reported to the registry as having an elevated blood lead level, the average being 40 μg/L, a level associated with adverse health effects in adults.

Shortly before the registry was established, the employees decided they had been poisoned long enough. A complaint was filed with OSHA and an inspection was conducted. The inspector was told by company officials that they no longer used lead and that there was no need to perform industrial hygiene sampling. The inspector took them at their word.

Frustrated, the employees approached the Massachusetts Coalition for Occupational Safety and Health (MassCOSH), a worker health and safety advocacy group (see COSH groups in Appendix B). There they told their story to staff members of the Latino Workers Project of MassCOSH. They explained that conditions had not changed in years and that employees were routinely sick from processes that were kept secret from regulatory agencies. They described conditions that were not unlike those of smelters from another century.

The workers were mostly non-English-speaking immigrants from Central America, many of whom had entered the United States illegally. They worked among family and friends at the plant and were unlikely to find other jobs. But they were not comfortable with their failing health and the daily compromises they were expected to make for a meager living.

The most vocal of the workers was fired after being accused of reporting working conditions to OSHA. The Immigrants Rights, Advocacy, Training and Education Project (IRATE) became involved in the case and worked with MassCOSH and the employees to establish strategies to improve working conditions. A union-organizing drive was initiated with the International Ladies’ Garment Workers Union (ILGWU).

By the time the state’s Division of Occupational Hygiene investigated the reports of lead poisoning at the plant, the employees’ organized struggle was well under way. The inspection revealed years of accumulated lead dust and debris, as well as very high levels of airborne lead from incineration of insulated wire and a process of sifting scrap metal dust and grit. Workers were not given clean washing facilities, and were forced to eat their lunches in a filthy washroom where a microwave oven was set up in a toilet stall. There was no soap, hot water, or towels. Many serious safety hazards were also observed.

OSHA was called back in, and this time it found many violations. It cited the company with 48 serious violations and 3 willful violations, accompanied by a fine of more than $200,000.

A review of the Division of Occupational Hygiene files later revealed that the company had a record that extended back to the 1930s, with nearly 50 site inspections. Each report was almost identical, with the company saying the process that had once produced lead was no longer practiced and that cleanup was in progress.

Why was the company able to elude the full authority of the regulatory agencies
Box 2-1  (continued)
for so many years? What happened that brought about the ultimate rigor of these agencies in this case? The answer appears to be that for the first time in 50 years, the workers were organized. Although they finally lost their union election, they did understand their rights and recognized the consequences of their working conditions.

Through the efforts of the advocacy groups, the workers were able to communicate critical information to the health and safety inspectors regarding lead-generating processes, so that inspections could be conducted under typical working conditions. All of the workers were interviewed during inspections in the presence of interpreters. The workers had been empowered to hold the inspectors accountable for workplace health and safety.

In addition to the issues of worker health and safety, for many years community residents had expressed concerns about their exposures to the environmental pollution produced by the plant. Inspections were conducted by the state’s Department of Environmental Protection and the company was ordered to halt certain processes and reduce emissions from others. Local oversight by the city’s health department was critical in informing the Department of Environmental Protection when conditions worsened, so that unannounced inspections could be conducted.

The conditions at the smelting company were reported to the state attorney general’s Environmental Strike Force. After months of scrutiny by that office, both civil and criminal charges were sought against the company. Under a civil consent order, the company removed all of the lead debris and cleaned the facility. Most of the lead-generating processes were eliminated, although the company still conducts a brisk business in metal scrap recycling.

Under the company’s settlement with OSHA, workers’ lead exposure is regularly monitored and they are protected against airborne contamination through a combination of engineering controls, personal protective equipment, and safe work practices. Blood lead levels have been significantly reduced.

Although the fines from OSHA and the threat of additional fines from the attorney general motivated the cleanup, publicizing the outcome of the criminal investigation is likely to be an effective deterrent to other companies that are exposing their employees to unsafe working conditions.

In addition to lower pay and fewer benefits, there are other negative aspects to this trend toward temporary and part-time work. Temporary workers live with the stress of not knowing when and for how long they will work. They have little or no job security.

Neither part-time nor temporary workers receive equal protection under government laws, including occupational safety and health regulations, unemployment insurance, and pension regulations. Few are represented by unions (13). A case study commissioned by OSHA of contract labor in the petrochemical industry (usually small contractors of nonunion workers, brought into

onomy, wages are low, benefits scanty, job security limited, and unions virtually nonexistent. Much of this work is part time or temporary.

In response to the shrinking economic pie of the 1980s, employers are increasingly using part-time and temporary workers to cut costs. The average part-time worker earns only 60% of a full-time worker on an hourly basis. Fewer than 25% of part-time workers have employer-paid health insurance, compared with nearly 80% of full-time workers. Sixty percent of full-time workers have pensions provided by employers, whereas only 20% of part-time workers have this coverage (13). In 1990, in the United States, there were 5 million involuntary part-time workers—that is, workers who would prefer to be working full time but were unable to do so.
2. OCCUPATIONAL HEALTH: A SOCIAL PERSPECTIVE

2. OCCUPATIONAL HEALTH: A SOCIAL PERSPECTIVE

... they will make, under what conditions they will make it, or what will happen to it afterward.

These choices are made for them by their employers, the sales and labor markets, and the working of the economy as a whole. Whatever control most workers have over how much they receive in return for their labor, how long they labor, how hard they labor, and the quality of the workplace environment is acquired in a contractual situation in which the workers' desire for comfort, income, safety, and leisure is continually counterbalanced by the employers' need for profit.

Many workers have profound ambivalence about their jobs. Although labor provides an income, workers also seek less tangible satisfactions from their work. For example, an unemployed miner reflected (20):

Some no doubt will find this a sad thing, the fact of not having any work, I mean. Others simply won't notice, while still others, with a more fundamental way of looking at things and sadly lacking a working-class consciousness, will utter some such expression as "Lucky bastard!"... Frankly, I hate work. Of course I could also say with equal truth that I love work; that it is a supremely interesting activity; that it is often fascinating; that I wish I did not have to do it; that I wish I had a job at which I could earn a decent wage...

The contradictions in this statement cannot be dismissed as the contrariness of human nature; they correspond to contradictions in the real situation. What workers love about work is the opportunity to guide their own lives and to do meaningful things. On the other hand, workers oppose their work being made meaningless by the ways it is organized by others and bleached of integrity, autonomy, and creativity for reasons of efficiency, productivity, and profit.

Modern production and market competition lead employers to seek the highest possi-
ble rates of productivity. The normal social interactions among workers that, in a less mechanized and fragmented work process, appear as part of the rhythm of work itself, are seen as disruptive to production. Attempts on the part of workers to establish some level of control and sociability in the workplace are often misconstrued. Employers and managers who see such acts as threats to productivity and efficiency consider them to be indications of laziness. Workers, even in nonunion settings, may view them as efforts to protect themselves against the requirements of a fragmented division of labor that treats them as tools rather than as people. These attempts to take greater control actually represent, consciously or unconsciously, the individual's desire to replace labor with work. The structure of the contemporary workplace undercuts such acts of rebellion and self-assertion, however.

Innovations such as word-processing technology, computerized record keeping, electronic mail, and computer and video monitoring have turned large offices into assembly lines. New forms of work organization have broken the close personal tie that frequently existed between secretaries and their employers, and new technology has downgraded the skills required. With these changes, clerical work becomes subject to the same kind of machine-like analysis and control as factory work.

Similar situations are often found in service, retail, distributive, and other types of work. What is true for the auto worker, the word processor, and the keypunch operator is increasingly the case for the short-order cook, the checkout clerk, and the telephone operator. One young woman describes her sense of powerlessness and alienation as a grocery store cashier (21):

It was extremely repetitive work. Pushing numbers all day sort of got to me. I used to have dreams, or should I say nightmares, all night long of ringing up customers' orders when it was after closing time. I have even woken up and found myself sitting up in bed talking to customers. That job ended when the whole building exploded one night because of some faulty electrical work. The summer of my senior year in high school I got another job as a cashier in a discount department store, doing the same thing, pushing numbers again. My nightmare of talking to customers in my sleep began again... This was a job that was an extremely strict one. There was no leeway about anything. They had cameras above the registers watching us to see if we were polite, if we checked inside of containers for any hidden merchandise, checked the tags to see if they were switched, etc. If we failed to do something we were given a written warning...

Everyone who worked there, with the exception of the management, was part-time. The schedules were made so that no one had exactly 40 hours. I worked for 3 months, 35 to 38 hours per week. By not giving us those few extra hours, they saved themselves a lot of money by not having to give their employees benefits, insurance, etc. Of course, their hiring, firing, quitting went on week after week. There weren't too many loyal employees.

A fractionated division of labor and "scientific" work discipline are ways of exerting managerial control in the interests of efficiency and profit (Fig. 2-7). The experience

FIG. 2-7. Long-distance telephone operator. Monotony characterizes many jobs. (Photograph by Earl Dotter.)
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of alienation and powerlessness on the part of the workers, however, is not limited to workplaces where this type of organization is imposed. Many jobs in small shops—particularly in the service and retail sectors, which employ the largest number of women workers—are equally unattractive despite a lack of specialization.

The characteristic jobs of a service sector economy tend, therefore, to replicate quite the alienating, repetitive work once associated with assembly-line production and the monotony of the modern factory. Today, developed countries, however, improved technology and the ubiquity of computers has enormously increased the potential for work as well as the ability of the work to be monitored. Technology combines pressures for increased productivity in an increasingly competitive world economy, "competitiveness" and the drive for productivity incur enormous costs in terms of worker health and well-being.

The constant demand to do work faster and more efficiently, to "produce" under the threat of being fired or laid-off, takes a huge toll on the mental and physical health of workers. The dignity of work is not evident in the voices quoted previously. As American recreational competitiveness declines further, and goods and services enter the United States from developing countries where workers get wages little above subsistence and often work in horrendous conditions, there is even greater pressure on domestic manufacturing to compete. The reality of that competition for most American workers has been demands for wage give-backs, compulsory overtime, work speed-up, and increasingly less attention to workplace health and safety.

Organized Labor

Unions are a way to counteract the disempowering, disenfranchising effects of class, race, and gender (see Chapter 40). They provide workers a voice in determining the rules and conditions of work, wage rates, and benefits. They are the collective strength that provides a counterweight to management power and prerogative. Some unions have been deeply involved in health and safety issues but, for most unions, such issues are only a few among many. In the United States, given the weakness of unions and the historic antagonism to organized labor, unions have not always been able to give the necessary resources to protect their members from workplace hazards. In Europe, organized labor has been more successful in combating the prerogatives of management and, in a number of European countries, social democratic political parties supported by labor movements have frequently been in power. Even in the United States, with its relatively weak labor movement and the absence of social democratic or labor parties, unions do offer some protection against arbitrary exercise of power.

Formally, unionized workers try to regain some control over the labor process through collective bargaining—the negotiation of work rules and grievance mechanisms, the institutionalized process for adjudicating individual complaints. However, only approximately 15% of workers in the United States are unionized, and even where grievance mechanisms exist, they are not always respected. Informally, workers seek what escapes they can find or fabricate. They sneak a surreptitious cigarette, they fantasize, they horse around, and they fight. "Anything so that you don't feel like a machine" is a common refrain.

Organized labor in the United States is now weaker numerically and politically than at any time since World War II. This decline began in the 1970s and continues through the late 1990s. Over the decade from 1985 to 1995, unionization rates declined 21% in the United States (22). The decline is evident across the whole range of union activity: loss of negotiating strength, decrease in membership, decline in strike activity, and a vast increase in "concessionary" collective bargaining agreements between unions and industry.
In contrast to the United States, in Great Britain, 55% of workers are in unions and labor governments have ruled the country. In Sweden, more than 95% of blue-collar workers are organized, and approximately 75% of white-collar employees are in unions. Over the past decade, unlike in the United States, Swedish unionization rates increased by 8.7% (22). For most of the past 45 years, Sweden has had a labor government, and the labor laws reflect that power (23). In Germany, France, and many other countries, the existence of a labor party (or a social democratic party) has enabled workers to push for and defend significant legislation to control workplace hazards and provide extensive schemes of social insurance and welfare.

The strength of a labor movement determines a host of issues that directly influence worker health, including what information is generated about workplace hazards, who has access to it, what workplace standards are set and by whom they are enforced, the options open to workers encountering a hazard, and the effectiveness of workers' compensation (23).

Unionized workers are more likely to be informed about the presence of health and safety hazards than are nonunion members in the same jobs (24). In addition to union-sponsored education programs, the union provides a shield against employer discrimination. This shield is extremely important for health and safety because employers may fire a worker for raising concerns about health and safety problems.

Unions in the United States and elsewhere have fought to create legislation requiring employers to clean up the workplace, to control the employment of women and children, to limit the hours of work, and to set and enforce industrial hygiene standards. In the United States, where OSHA requires that workers be informed about the hazards associated with the chemicals with which they work, unions have pushed to make sure that employers comply with these "right-to-know" regulations. When there was no federal right-to-know law, some unions negotiated this right, as well as the right to refuse unusually hazardous work (see Chapter 10).

**Unemployment**

It is striking that, even though unsatisfying jobs produce hostility in many workers, almost all workers would rather have a job than no job at all. One worker says of unemployment: "Lovely life if you happen to be a turnip. . . . One does not willingly opt for near-the-bone life on the dole. My personal problem is easily solved. All I need is work" (25).

Unemployment is more destructive to physical and mental health than all but the most dangerous jobs. Studies have even suggested a correlation between unemployment and mortality from heart disease, liver disease, suicide, and other stress-related ailments (26). Changing levels of unemployment have an impact not only on unemployed workers but also on their families. For example, households in which the husband is unemployed or underemployed show rates of domestic violence two to three times greater than in households of fully employed men (26). Many studies have shown that workers internalize the experience of joblessness as personal lack of worth. This sense of worthlessness appears completely unrelated to a worker's actual degree of responsibility in losing his or her job (27).

In the 1980s, the unemployment rate in the United States fluctuated between 6% and 11%. Some economists have proposed that a 5% unemployment rate be considered "full employment." The late 1990s have brought the unemployment rate in the United States to just below 5%, but the memories of unemployment, along with feelings of expendability, remain fresh to many Americans.

Unemployment has also become a regional and international problem, with the official average unemployment rate among the 12 member states of the European Community almost 13% in 1993. Furthermore, these unemployment rates are based only on those actively seeking work; by excluding
those jobless who, through discouragement, stopped looking or never began to look for work, the official data understate the magnitude of the problem. Unemployment rarely include the underemployed, working part-time who seek full-time and those women who would be working, well paying jobs were available. In the developing world, the percentages of those who are unemployed or underemployed is often much higher than in the States or Europe.

Unemployment has significant economic The existence of many unemployed keeps wages down as more people vie for jobs and are willing to take low wages in the struggle to earn a living. The loss of income in organized communities is high as workers lose jobs in manufacturing industries where unions had strength—and as violent campaigns against unions, the syndicates encouraging people to join unions that are significant organizing drives be larger. All these factors weaken the efforts to protect workers from occupational hazards.

Second Key Actor: Management

Reasonably, there are firms that seek to have safe and healthful work environments. These are frequently large, profitable enterprises that have relatively secure markets for their products and that have decided that continued success depends on a diversified, high-quality, and healthy workforce. Frequently these are firms that have committed to collective bargaining and to negotiating industrial peace. Even so, these firms have decided that the only way they can attract and keep highly skilled workers is to ensure the quality of working conditions, concerned about product quality, and because of consumer concerns or the accident risks of their technology, have attained worker health and safety virtually as an added value.

The remarkable success of Japanese industry in reducing its injury rate, probably as a consequence of its attention to quality in the general and its abhorrence of waste, may have beneficial consequences in American and European firms pursuing Japanese-style manufacturing success. Sometimes these company efforts may miss the problems associated with low-level chemical exposures, because they focus primarily on the more obvious safety hazards. Nevertheless, such efforts are to be applauded.

Some small firms pay serious attention to safety and health hazards because the owner or manager came up from the ranks, knows the processes well, and maintains close social contact with the employees. The economic pressures on small companies, however, may undercut even the most decent employer. For small or large firms, the pressures of the market are hard to resist. In these cases, the role of government in enforcing work environment standards is particularly important.

The Third Key Actor: Government

A third key actor in the complex of workplace health and safety is “government” in the form of regulatory intervention (see Chapter 10). The impact of state intervention in health and safety is defined by that set of institutional—legislature, executive, judiciary, and civil service—that responds to needs and initiates policy, establishes laws and regulations, and implements them. In this century, social policies created by government have embraced such measures as unemployment benefits, pensions, and medical insurance, and have protected consumers (such as by control of food additives and laws on advertising and product liability), preserved the environment, and promoted public health and safety.

Why should the state in free-market economies interfere in the operation of that market to ensure the achievement of public welfare goals? What prompts the state to ascribe to itself a regulatory role? The effort to protect the health and safety of workers provides
an excellent example of the contradictory forces operating on the state.

On the one hand, such regulation helps ensure the continued existence of a healthy workforce capable of continual productivity, resulting in a positive effect for the economy as a whole. By creating national rules and regulations, it equalizes the responsibilities, as well as the penalties, among industries by requiring certain minimum standards in the workplace, thus giving stability and continuity to all forms of production. Further, by establishing the apparently neutral and regulatory role of the state, such intervention increases the legitimacy of the existing political order. The state must respond to public pressures and to demands that it intervene to prevent illness, injury, and death on the job. It must appear to be responsible and responsive to the concerns of trade unions, workers, and public opinion.

On the other hand, such regulation may have enormous costs for capitalism as a whole and for individual firms. By controlling activities at the point of production, such direct state intervention challenges control of the workplace and, by requiring certain levels of safety and minimum health measures, it imposes costs on industry that may affect profitability. In addition, such intervention gives specific rights to workers (such as the right to refuse unsafe work), which, again, threaten managerial and corporate control of the production process. Of course, the particular ways in which government develops and implements policy are constrained by the constitutional and governing structures of a given country and by the ideological and cultural mix arising from history and traditions.

As countries industrialized and factory production became centralized, the issue of working conditions emerged as a serious cause for concern. In England, the state began to develop laws to prevent the worst abuses. In most countries, as modern industrial production became established, the state was forced to take action to improve working conditions. In nearly all cases, legal protections grew in piecemeal fashion, reflecting class pressures as well as moral outrage at working conditions.

Because most countries faced similar problems, the solutions have taken largely the same form. In Britain, the body of laws (until the passage of the Health and Safety at Work Act in 1974) reflected the incremental progress of legislative action. In Germany, France, Sweden, and some other European countries, specific problems in the field of health and safety were dealt with as information about a given issue became available or as pressures built up to demand legal or administrative action.

In the United States, the history of health and safety legislation has taken a somewhat different course. Influenced by the federal structure of the country, it was not until the passage of the OSHA Act in 1970 that the United States had a comprehensive federal law to control workplace conditions. The creation of OSHA resulted in extensive debate about the role of the state in the American polity, and the agency has often been stigmatized as a vivid example of too much government (see Chapter 10).

The United States case is especially interesting in that, alone among the developed capitalist economies of the West, the commitment to welfarism has remained embryonic. Although the characteristic structures and programs of the welfare state are not entirely absent, they remain relatively undeveloped in the United States compared with Europe.

Since the passage of the OSHA Act and the creation of OSHA, the struggle for healthier and safe working conditions has raised issues of control of the workplace and organization of production. Throughout the 1970s, intense debates occurred over the role and actions of OSHA, the validity of the scientific evidence on the dangers posed by chemicals, the enforcement of standards, the extent and legitimacy of government regulation, and workers' rights to a hazard-free working environment. From the time the first draft of the OSHA Act appeared before Congress, in-
The relationships among major social actors—labor, management, and government—define the rules of the work environment, including health and safety standards and practices as well as boundaries within which health care providers, occupational health specialists, and health and safety advocates operate. Although the web of rules sets real limits on reform at the point of production, changes in global factors can open up new possibilities to provide a safe and healthful work environment.

HEALTH AND SAFETY SPECIALISTS

What is the significance, then, of this analysis for the actual work of health care providers and, in particular, occupational health specialists?

In the United States, the largest group of people working in occupational health are occupational health nurses. Other professionals include occupational health physicians, industrial hygienists and industrial hygiene technicians, safety engineers, ergonomists, health and safety educators, and program administrators. Ideological assumptions determine aspects of scientific investigation and research. Scientific disciplines focus attention on the technical aspects of occupational hazards and underestimate the importance of the macrosocial and microsocial, economic, and political context. In this regard, some workplaces have worker or union safety stewards and, increasingly, joint labor-management occupational safety and health committees comprising nonprofessionals who are involved in hazard surveillance as well as injury and illness prevention. These people tend not to be imbued with the scientific model of research and hazard control, a tendency which, in some circumstances, may be advantageous in dealing with workplace hazards.

Where do these different types of people responsible for occupational health work? Some are blue-collar workers in factories with special assignments on health and
safety. Most occupational health professionals work for companies as staff. In most companies, they are part of human resources or labor relations departments or, much less commonly, part of a safety and health department that is directly responsible to top management. With surprising frequency, health is separated from safety, with professionals from the different fields reporting through different hierarchies. Rarely are work environment professionals given direct responsibility and authority over production; they are advisory staff and can be influential, but basic decisions are made typically by “production” managers, even in service industries. In the private market, profit making is the prime commitment of the enterprise.

Small companies—where most people in the United States and the rest of the world work—rarely have professionals in health and safety on their payrolls. If they do, the professional most often is an occupational health nurse. Usually, such firms rely on ad hoc consultations with independent professionals or simply on emergency medical services. Occasionally, there may be a relationship with specialist occupational health clinics or services. Such consulting operations must sell their services and are sometimes confronted with ethical difficulties because their clients are companies, not sick or injured workers (or workers at risk because of workplace hazards). Large and small companies buy the services of a wide range of consultants, often without understanding the degree of specialist knowledge and training necessary for effective management—and prevention—of health and safety problems.

In addition, many small firms, and some large ones, rely on professionals employed by workers’ compensation insurance carriers. “Loss prevention” departments of the insurance companies, however, may be as concerned with reducing short-term financial losses as reducing injury rates, and they may focus on case management rather than prevention of disease and injury. A new type of consulting firm has emerged to reduce workers’ compensation costs through “managed care” for injured workers. It is probably too soon to tell whether these firms, working on contract with employers, will attempt to reform the work environment or seek to reduce company expenditures in other ways.

Some professionals in this field work for labor unions (see Chapter 40). Although groups such as the United Mine Workers of America have had health and safety staff members for many years, the real growth of occupational health professionals in labor unions has happened since the 1970 passage of the OSHA act. Nevertheless, the number of physicians, industrial hygienists, and other work environment professionals employed by the labor movement remains quite small and is usually at the national or international level. These people usually provide policy assistance rather than direct services to workers. An exception is the government-subsidized growth in the number of health educators working for unions, some providing or facilitating general health and safety education, others working on targeted programs, such as hazardous materials training for emergency responders and other hazardous waste-related workers.

Finally, and perhaps most important, many practitioners, including those in the full range of work environment professions, are employed by government agencies, usually as inspectors but sometimes as technical advisers to government or industry, or as educators. In the United States, practitioners are employed by such institutions as OSHA, the Mine Safety and Health Administration, the Department of Energy, the Environmental Protection Agency, the National Institute for Occupational Safety and Health, and state departments of labor and of health.

CONCLUSION

The significance, then, of a social analysis of the fundamental, but often unrecognized, problem facing health care providers and others working in occupational health is that they frequently are in the difficult situation of having responsibilities for worker health.
while working in organizations with other priorities. Management and government organizations are influenced by economic responsibilities that may compromise worker health and safety. Even labor organizations with their key responsibility to rank-and-file workers may find health and safety low down on a list of concerns and demands. In Fig. 4, professionals in occupational health are not separately identified because they fall under or between the listed categories.

Health professionals can be successful in improving the working environment, especially if they understand the social and economic context of their efforts and work toward “win-win” situations. For example, where workers’ compensation costs to a company are high, it may be possible to improve the economic performance of the company and improve worker health through preventive measures. In cotton textile manufacturing, new equipment increased productivity and reduced cotton dust exposure of mill workers. When OSHA mandated reductions in vinyl chloride exposure, the controls introduced by the companies resulted in increased profits. Some have argued that health and safety regulation may stimulate companies to technological innovation they might not otherwise have considered (28). Health and safety practitioners need to master economic as well as humanist arguments for change.

Sometimes, however, the economic arguments alone are not sufficiently convincing to sway management. Many industrial hygienists are members of regional and local professional groups that exchange technical information. These groups have codes of ethics (see Chapter 13) that can inspire and strengthen efforts to improve the work environment. An important source of support, as well technical and strategic ideas, for professionals in occupational health and professional education are the professional societies, such as the American Association of Occupational Health Nurses, the American College of Occupational and Environmental Medicine, the American Industrial Hygiene Association, the American Conference of Governmental Industrial Hygienists, the Human Factors Society, the American Public Health Association, and the American Society of Safety Engineers. Professionals in occupational health, however, need to think in broader terms than usual when confronting difficult situations and recalcitrant employers. In many states, occupational health professionals have played important roles in new coalitions of labor activists and environmentalists. Committees or coalitions for occupational safety and health (COSH groups) have engaged in worker education and advocacy since the early 1970s and have been instrumental in establishing right-to-know laws in some states, in improving workers’ compensation in others, and in focusing the attention of labor unions and the general public on health and safety issues (see Appendix B). These groups represent a grassroots movement that links professionals and concerned citizens in a new way to improve the work environment.

REFERENCES