

PENNSYLVANIA CENTENNIAL SPECIAL



**THE RELATION OF WORKERS' COMPENSATION
ENACTMENTS TO THE GROWTH OF
OCCUPATIONAL MEDICINE
AND INDUSTRIAL HYGIENE**

by David B. Torrey, Workers' Compensation Judge

Many in the workers' compensation community know of the great historic figure Alice Hamilton, one of the founders of occupational medicine. If you visit Hull House in Chicago (now a museum), the "settlement house" established by Jane Addams, you will hear and read of Hamilton's activities promoting industrial health in the factories of the day.



Hull House

What may not be so well known is that the enactment of workers' compensation laws had a significant impact on the growth of Hamilton's field of occupational medicine. The enactments also *spawned* the field of industrial hygiene. An account of this phenomenon is found in Dr. Christopher Sellers' book *Hazards of the Job: From Industrial Disease to Environmental Health Science* (UNC Press 1997).

I have, for many years, recommended this book to Pitt Law students who are interested in workers' compensation and its history.



Sellers, a history professor at SUNY-Stony Brook, explains how the dangerous work conditions attendant to the industrial revolution gave rise to an interest, in many quarters, in how worker health could be better protected.

Early investigations, usually by physicians, often focused on lead poisoning, which had long been known to generate bad health effects. Lead-based paint became very popular in the late nineteenth century, and workers engaged in both the manufacture and use of paint were routinely poisoned. The workers who painted the many buildings of the 1894 Chicago Exposition a gleaming white, the author points out, are a good example. Workers engaged in the mass production of nails, meanwhile, were frequently poisoned by lead dust from milling machines.

While the work-related nature of lead poisoning was known, the occupational etiologies of many other ailments were poorly understood or not recognized at all. In addition, in the late nineteenth century, practitioners had little science to guide them in this area. Physicians were not systematically trained to identify occupational diseases, and a lack of information-sharing existed. Even Osler, the progenitor of modern American medical education, slighted the issue in his classic text *The Principles and Practice of Medicine* (1892), discussing at length only lead poisoning and pneumoconiosis.

In general, the risks of invisible disease hazards in the workplace, which often caused insidious, as opposed to acute harm, were less easy to perceive and understand than was the plague of accidents which even the layperson could tell constituted a crisis in the budding mass-production factory system. Thus, attention to occupational diseases (and later, provision of compensation therefor) lagged behind that accorded to accidents.

Things began to change when unsatisfactory work conditions induced many progressives, mostly social scientists and physicians, to investigate the worst workplace conditions. Most of these reformers were directly influenced by their counterparts in Europe, who had for decades undertaken research into workplace disease hazards and had published scholarly articles on such dangers.



While the author posits that lay social reformers, rather than doctors, set the early pace for occupational disease research in our country,¹ the book's hero is Alice Hamilton, a physician. As noted at the outset, she started her work with public health issues at Jane Addams' renowned Hull-House. Chapter Three of *Hazards of the Job* is largely devoted to a profile of Hamilton and, among other things, her efforts to persuade the captains of the lead industry to adopt safer working conditions. Her approach was to show through empirical studies that workers were, indeed, being systematically poisoned. She sought to persuade industrialists that this was not only unethical, but at the same time bad for business. Were members of the consuming public to learn that employees were being made sick during the production process, they might well boycott the offending businesses.

The author explains that Hamilton ultimately became a factory inspector for the state of Illinois, and a leading researcher for the new U.S. Bureau of Labor, and he details her path-finding activities in these positions.

The author identifies Hamilton as one of the earliest professionals to make occupational disease research a full-time career. Her "great contribution . . . , as the federal government's first regular occupational disease investigator, was to transform the more formal, medically dependent workplace scrutiny . . . into an accepted function of the central state. . . ." Another contribution was that, because of her efforts to show that exposures made workers sick, and that some exposures could be reduced or eliminated, the "naturalness, the inevitability, of workplace-caused disease was opened to public question."

Still, Hamilton was not a micro-managing regulator who would propose to meticulously legislate workplace safety. She placed her hopes on the idea that the growing and shared knowledge of industrial hygiene experts would induce industrialists to act ethically and create a safe workplace – if for no other reason than the fear of poor sales. The author refers to this as the "Hamiltonian preference for the sticks of public opprobrium and poor sales over those of state-levied sanctions and fines. . . ."

¹ The author discusses the advocacy of the American Association for Labor Legislation (AALL), which was also in favor of no-fault workers' compensation laws.

Hamilton was not alone in creating the field of occupational disease research. The author notes that in the early part of the century, investigating diseases became important to the careers of medical academics. Within a decade, Harvard University, under the leadership of Dr. David Edsall, had created a program in Industrial Health and Medicine, and the periodical *Journal of Industrial Health* was founded. Hamilton was on the Harvard faculty, as were the famous researchers Cecil and Katherine Drinker. Harvard, the author explains in detail, was the leader in laboratory-based studies into occupational health (*i.e.*, undertaking studies on animals). This was a departure from the prior model that emphasized on-site studies of the effects of suspected disease hazard exposures on workers themselves.

In addition, in the early twentieth century the federal Public Health Service started its own studies under the leadership of Joseph Schereschewsky. He stressed, among other things, the importance of screenings and routine exams, both to insure and monitor employee health. (Frequent and aggressive screenings, Sellers notes, were unpopular with unions, which perceived them as being largely undertaken for the employer's benefit.) Schereschewsky was also an early proponent of common standards of medical supervision among industry, and he favored the specialized training of company doctors.

The most memorable aspect of the book, *vis-à-vis* workers' compensation, is the author's observation that the advent of workers' compensation generated in the insurance industry a desire for awareness of workplace disease hazards, and also the rise of the company physician:

Beyond the new state agencies charged with implementing compensation, the compensation system stimulated growth of managerial groups within industry itself charged with handling compensation-related functions. Among these groups were not only the safety engineers, who proliferated among the insurance companies that began to offer workers' compensation policies and in many other workplaces, but also new cadres of company doctors....

[T]o relieve firms of the now more thoroughly internalized cost for medical care of worker injuries, company physicians increasingly focused not just on treating but on preventing accidents and the related compensation claims. To reduce compensation payments, many more company doctors collected information on bodies of the ostensibly well along with the injured or sick through systematic physical examinations. Most often they screened new employees with exams to determine what job was most appropriate for an applicant and to exclude those whose physical impairments made them accident-prone. Pre-employment exams also furnished companies with information about an employee's physical condition, which could later prove useful at compensation hearings if an employee sought recompense for a preexisting ailment. For many of the

same reasons, some companies gave their physicians the task of conducting exams among their current employees on a continuing basis.²

At least two little-known phenomena are revealed here. First, this workers' - compensation-driven interest by insurance companies in safety studies was so pervasive that the occupation of "safety engineer," as we now know it, was originally "insurance engineer." Second, great hopes originally existed that training programs for company physicians would flower in medical school courses of study, and that the occupation would gain an exalted specialty status.

In a chapter called, "*Pax Toxicologica*," the author explains how the industrial hygiene movement by the 1920's and 30's was no longer perceived as a threat by industry. Instead, corporations had increasingly been persuaded that the occupational health of its workers worked in its own interests. Many businesses actually sought out researchers at Harvard and other universities for investigations, and many studies came to be funded by corporations and corporate-funded foundations.

By the 1940's, indeed, unions had come to view industrial hygienists as largely an occupation laboring in the employer's corner. While collective bargaining agreements would include "general clauses forbidding health hazards ... workers could not fail to recognize that industrial hygienists tailored their discipline primarily to the manager's ear, and unions sometimes rebelled against the hygienists' ministrations.... Partly for lack of trust, partly, too, from an increasing focus on medical benefits rather than disease prevention, and because of their own more limited funds, unions devoted less resources to industrial hygiene staffs than did employers. Thus, more often than not, industrial hygienists paid by the corporation became the arbiters of worker complaints, extending managerial control over working conditions even as they alleviated workers' physical ailments."

The author concludes (and begins as well) with the interesting observation found in the subtitle of the book. In this regard, many of the principles and examples of research that were pioneered in *industrial* health studies were followed in the newer field of *environmental* health, such as the study of pesticides undertaken by Rachel Carson in the classic *Silent Spring*. "Without industrial hygiene," he writes, and explains at length, "postwar environmentalism ... and *Silent Spring* itself would have remained unimaginable...."

² *Hazards of the Job*, pp.11-12. (Footnotes omitted). Among the author's references are H. Selleck & A. Whittaker, *Occupational Health in America* (1962); T. Hazlett & W. Hummel, *Industrial Medicine in Western Pennsylvania, 1850-1950* (1957); D. Walsh, *Corporate Physicians: Between Medicine and Management* (1987); Starr, *The Social Transformation of American Medicine* (1982).