

LEADERSHIP WITHOUT AUTHORITY

The Example Set by Dr. Alice Hamilton

By Sharon M. D'Orsie

PHYSICIAN ALICE HAMILTON (1869-1970)

established the disciplines of industrial hygiene and industrial toxicology in the U.S. through her tireless efforts to identify occupational exposures to toxic materials in industrial settings. From her first teaching position in Chicago in 1897 through her retirement from Harvard in 1935 and subsequent consultant status at the U.S. Department of Labor, Hamilton exposed unsafe conditions involving chemicals such as phosphorus, lead, aniline dyes, picric acid and carbon disulfide (Moye, 1986). Yet, she was poorly resourced and had little or no direct power during her intense investigative years—the period from 1908 to 1919.

How was Hamilton able to influence the occupational health of a nation with little money or organizational status? Today's OSH professional can gain insight into leadership without authority from this public health pioneer.

REPRINTED FROM AUGUST 2004

At the time this article was published, Sharon M. D'Orsie, CSP, CIH, was an assistant professor of environmental safety and health at the University of Southern Maine. Before joining the school's faculty, she worked for more than 25 years in industry and as a consultant. D'Orsie holds a B.S. in Chemistry from the University of Pittsburgh, an M.S. in Water Supply and Pollution Control, Doctor of Science in Hygiene in Environmental Health from the University of Pittsburgh Graduate School of Public Health. She also holds a Master of Education from the University of St. Thomas. D'Orsie was a member of ASSP's Maine Chapter.

Understanding Young Alice Hamilton: A Brief Background

Raised in an extended family, Hamilton was homeschooled primarily by parents who valued education. As a child, her first research question, posed by her father, was to use the Bible to find proof of the doctrine of the Trinity. Hamilton dreamed of becoming a medical missionary in Tehran (Hamilton, 1995).

I chose medicine, not because I was scientifically minded, for I was deeply ignorant of science. I chose it because as a doctor I could go anywhere I pleased—to far-off lands or city slums—and be quite sure that I could be of use anywhere. I should meet all sorts and conditions of men, I should not be tied down to a school or college as a teacher is, or have to work under a superior as a nurse must do. (p. 38)

When the new physician accepted her first job teaching pathology, she moved into Chicago's Hull-House. Living in this community, which she called home for 22 years, solidified her crusade, as Hull-House was a crucible for social reform.

Social advocates and fellow housemates Jane Addams, Florence Kelley and Julia Lathrop supported and fueled her passion for public health. Addams worked to advance political and social

FROM THE
ARCHIVES

2004

The safety profession continues to evolve as its practitioners adapt to the changing world of work and business, apply advancements in science and technology, and respond to world events. Yet, regardless of the era, safety professionals consistently demonstrate strong dedication to making the world a safer, healthier place.

Physician Alice Hamilton established the disciplines of industrial hygiene and industrial toxicology in the U.S. with little or no direct power during her intense investigative years. This article from the 2004 *Professional Safety* archives discusses Hamilton's success and how today's OSH professionals can gain insight into leadership from this public health pioneer.

equality with special interest in women and children. Hull-House offered a day nursery, kindergarten, playground and public bath. Kelley pioneered reform of working conditions, serving as the Illinois Chief Inspector of Factories. She worked to pass an 8-hour law for working women (which was overturned by the courts after just 2 years). Lathrop concerned herself with mental health issues, seeking reforms in the insane asylums throughout the state.

As Hamilton (1995) recalled, “At Hull-House, one got into the labor movement as a matter of course, without realizing how or when” (p. 80). She explains:

It was also my experience at Hull-House that aroused my interest in industrial diseases. Living in a working-class quarter, coming in contact with laborers and their wives, I could not fail to hear tales of the dangers that workingmen faced, of cases of carbon-monoxide gassing in the great steel mills, or painters disabled by lead palsy, of pneumonia and rheumatism among the men of the stock yards. . . . There was a striking occurrence about this time in Chicago which brought vividly before me the unprotected, helpless state of workingmen who were held responsible for their own safety. (Hamilton, 1995, p. 114)

What Does a Leader Do?

Before discussing Hamilton as a leader, an examination of leadership is appropriate. A buzzword in business lexicon, leadership is often confused with management. These are different activities, both of which are critical to organizational success.

Management deals with the complexity of an organization and its ability to successfully function with order and consistency. Typical functions of managers include planning, budgeting, staffing and controlling. By contrast, leadership involves setting a direction and implementing change. Typical functions of a leader are aligning, motivating and inspiring people (Kotter, 1999). Leadership means setting a direction, then aligning and motivating people to make the vision a reality.

Competence

Competence is the underpinning of an effective leader (Cohen, 1990). It is often underemphasized as a key leadership component in today’s fast-paced, global, electronic world. Competence denotes study, practice and evaluation in a continuous loop. Before and while Hamilton was a leader, she was competent in her profession. Academically, she studied at the Fort Wayne College of Medicine, University of Michigan, Johns Hopkins University, and the universities of Leipzig and Munich in Germany (Garraty & Carnes, 1999). She specifically recalled studying physiology, biochemistry, pharmacology, anatomy, clinical laboratory, surgery, obstetrics and gynecology, eventually observing that she especially enjoyed bacteriology and pathology (Hamilton, 1995).

Improving the conditions of America’s working people through identifying, then reducing toxic chemical exposures became Hamilton’s passion and dream.

When Hamilton entered her most intense investigative period at age 39, she was personally and professionally prepared. She published regularly, with titles such as “Lead Poisoning in the Smelting and Refining of Lead,” a bulletin for the U.S. Bureau (later Department) of Labor, Bureau of Labor and Statistics. Between 1914 and 1929, Hamilton published at least nine of these bulletins, as well as articles in the *Journal of Industrial Hygiene* and a book, *Industrial Poisons in the United States*. An early mentor respected Hamilton’s scientific approach to prob-

lem solving: “Her results were clear, complete, logical, well arranged and reinforced by her power of wide scientific reading in foreign tongues and fields” (Sergeant, 1966, p. 224). With her competency sure, Hamilton established her vision.

Setting a Direction

Improving the conditions of America’s working people through identifying, then reducing toxic chemical exposures became Hamilton’s passion and dream. She recalled:

It was pioneering, exploration of an unknown field. No young doctors nowadays can hope for work as exciting and rewarding. Everything I discovered was new and most of it was really valuable. I knew nothing of manufacturing processes, but I learned them on the spot. (p. 121)

Hamilton devoted herself to her dream. As Bellman (1992) aptly expressed:

Dreams are not realized through small investments of energy, and leaders portray this. Leadership can be seen as energy collected, directed and released toward a future vision. . . . One of the primary functions of a leader is to create energy. (p. 19)

To reach her vision, Hamilton created energy. For example, while investigating the painters’ trade, she visited the Pullman works that manufactured Pullman train cars. She found cases of severe lead poisoning accompanied by a facility medical department “of a primitive simplicity which seemed incredible” (Hamilton, 1995, p. 157). Feeling powerless to make change, she enlisted the help of Mrs. Joseph T. Bowen—“one of the first and staunchest friends of Hull-House”—who, as a major holder of Pullman stock, instigated changes within the company (Hamilton, 1995, p. 158).

Hamilton’s energy enabled her to work tirelessly. Although she enjoyed her family, she never married. She lived simply, with Hull-House as a continual “safe base” where she returned following travels and investigations. Hamilton was enlivened by the excitement of her work and discoveries.

In her forties, she had finally discovered her true vocation. Her initial forays into the field had been marked by characteristic tentativeness and self-doubt. But soon it became apparent, even to her, that no one knew more than she did. The

pioneering nature of her work gave her real pleasure, and she made the most of it, both at the time and later. Never given to self-glorification, she could claim, without seeming to boast, that almost everything she learned in the early days was new, and much of it “really valuable.” (Sicherman, 1984, p. 180)

Becoming the leader in industrial toxicology seemed an unlikely course for this woman. Hamilton clearly had to reach deep into herself to overcome many career obstacles. She remembered her medical internship as “a blur of fear and bewilderment” (Hamilton, 1995, p. 42). She described herself in these words: “I have always hated conflict of any kind, but with me this leads to cowardice, to shirking unpleasantness. . . . [I] have forced myself to say the unpleasant things which had to be said” (Hamilton, 1995, p. 63).

This hesitancy must have been a challenge when she and her findings were not always welcome, a disappointment that she chronicled. For example, while working with the federal government during World War I, she and her students investigated the explosives industry.

Our students unearthed some very shocking conditions, under criminally negligent doctors, all of which they reported to us, but even the committee (established through the National Research Council) backing me was not influential enough to bring about reforms. It is hard to believe that this rich and safe country should refuse to give its munition workers the sort of protection which France and England, fighting for their lives, provided as a matter of course. But it was impossible to overcome the arrogance of the manufacturers, the indifference of the military, and the contempt of the trade unions for non-union labor. (Hamilton, 1995, p. 198)

Aligning People

Leaders need other people to affect change. How did Hamilton align the right persons to initiate reform? Aligning people recognizes that all persons function in social and business systems that are political. Successful leaders recognize that they are part of a political process and proposed action will be considered politically and objectively (Bellman, 1992). Hamilton’s fateful decision to join the Hull-House settlement in 1897 integrated her into a significant organization dedicated to social reform and provided her contact with regional political leaders even before she realized the value of such contacts.

By 1897, Hull-House had become a genuine neighborhood center, a channel for social action in city and state, and a model for reformers through the nation. Already the most famous American settlement, it accommodated some 25 residents, three-fourths of them women, and received several thousand visitors each week. (Sicherman, 1984, p. 114)

Hamilton was able to motivate businessmen to change their operations by appealing to their best instincts—their innate desire to do the right thing.

A career-defining assignment and opportunity arose in 1908 when Illinois Governor Charles S. Deneen appointed Hamilton and eight men to the Illinois Commission on Occupational Disease. The commission had a 1-year assignment to identify industries with potentially toxic chemical exposures to workers. This assignment led Hamilton to other industrial medicine assignments within the state of Illinois, which in turn led to a job with the U.S. Bureau of Labor.

What alignment made her initial assignment possible? Charles R. Henderson, a sociologist active with many city and state commissions, knew of Hamilton’s interest and recommended her to the governor (Sicherman, 1984). Similarly, through professional activity, she secured her 1910 invitation to join the U.S. Bureau of Labor as a special

investigator for industrial diseases. Charles P. Hamilton, the U.S. Commissioner of Labor, had a particular interest in industrial poisons. He asked her to join the bureau following her presentation at the International Congress on Occupational Diseases in Brussels (Moye, 1986).

Motivating People

The final aspect of leadership that Hamilton had to master was motivating people. One aspect of motivating people involves the identification of common goals. Others must desire the leader’s objective; the leader must see this objective as a way that the involved parties can achieve success (Bellman, 1992). How was Hamilton, armed only with science, data and conviction, able to motivate industrialists to change their operations? At the time she was pioneering her reforms, no laws were in place to protect workers. When she accepted the assignment from the federal government to conduct investigative surveys, her task was formidable.

The investigation was to cover all the states, taking one trade at a time, and it must be understood that I had, as a federal agent, no right to enter any establishment—that must depend on the courtesy of the employer. I must discover for myself where the plants were, and the method of investigation to be followed. The time devoted to each survey, that and all else was left to my discretion. Nobody would keep tabs on me, I should not even receive a salary; only when the report was ready for publication would the government buy it from me at a price to be decided on. (Hamilton, 1995, p. 128)

After she collected data and information, and prepared a report, Hamilton took the next step, which was outside of her assigned responsibility.

Despite her dread of conflict, she made it a rule to present the person in charge with her findings, no matter how unpleasant. Many were initially suspicious of her motives, fearing she intended to hold them up as public examples. But, temperamentally predisposed to work by persuasion rather than confrontation and con-

vinced as well that the evils resulted from genuine ignorance, she disavowed the techniques of exposure favored by her muckraking contemporaries. (Sicherman, 1984, p. 168)

Hamilton was able to motivate businessmen to change their operations by appealing to their best instincts—their innate desire to do the right thing. She made her case with persistence, persuasiveness, sincerity, and carefully collected and presented hard data. Her success with Edward Cornish, president of National Lead Co., provides an example. Hamilton informed him that she was sure men were being poisoned in his white-lead and lead-oxide plants in and near Chicago. Cornish was both “indignant and incredulous,” she reported. He offered, “Now, see here. I don’t believe you are right, but I can see you do. Very well then, it is up to you to convince me. Come back here with proof that my men are being leaded and I give you my word I will follow all your directions, even to employing plant doctors.” Hamilton did just that, providing authentic records of 22 cases of lead poisoning requiring hospitalization. “[Mr. Cornish] was better than his word” (Hamilton, 1995, pp. 10-11).

A similar success occurred in a white-lead and oxide plant on the East Coast. “It was a dreadful place, old, dusty with the dust of years, no attempt at any control of the obvious dangers, just hopefully bad.” Hamilton reported to Mr. Ed, the manager, her observations of the dangerous conditions. He replied, “May I have all that in writing, please? I have known for some time that things were not as they should be, but I did not know what should be done nor whom to turn to for advice.” He proceeded to follow her recommendations (Hamilton, 1995, pp. 136-137).

Hamilton’s industrial hygiene recommendations for the lead industries emphasized dust control, including improved work site housekeeping practices, local exhaust ventilation and personal hygiene, such as hand cleaning. Although she supported legislative changes and the public dissemination of information, Hamilton made significant change by demonstrating to those in charge that they could assuage human suffering by making changes.

Applying Hamilton’s Example in OSH Today

Hamilton’s story is both dramatic and inspiring. She worked in the absence of regulations and controls, pioneering the field of industrial hygiene in the later days of the industrial revolution in the U.S. Despite the fact that her work occurred between 50 and 90 years ago, the contemporary OSH professional can learn lessons in leadership from her example.

Hamilton’s life affirms that competence is the underpinning of leadership. Today’s OSH professional must identify core knowledge requirements and acquire that knowledge. One can achieve this through continuing education opportunities such as taking college-level courses to buttress weaknesses. OSH professionals who fail to understand the nature of their employer’s business in sufficient detail (whether it is how molecules combine or how trucks are dispatched) will be less effective due to lack of competency.

Hamilton’s career also affirms that setting a direction and establishing a vision is hard, continuous work. Being a leader means that the person is focused on the vision to the extent that other achievements may not be possible.

Hamilton enjoyed little financial wealth; she traveled extensively to undesirable locales and she relocated her place of residence.

Hamilton’s experiences also reveal the importance of aligning with people who can help achieve the vision. Early in her career, Hamilton’s alignments, although fortuitous rather than deliberate, were critical to getting her into a visible position to advance her work. Later in her career (which is not examined in this article), she cultivated alignments. Much of her support came from those knowledgeable of her work and profession. Hamilton delivered speeches and published papers—she made herself known. The contemporary OSH professional has the same opportunities through various affiliations with professional associations.

Hamilton’s effectiveness in bringing about change was expressed in her ability to motivate people to change. Void of cynicism or avarice, she affected reform through persistence, persuasion, science and the belief that most people, given the facts, will make the moral decision. In light of recent corporate scandals, does such thinking apply in today’s world? Absolutely. First, although it would be easy to be cynical about the futility of being an OSH professional in the scandal-ridden business world, one must acknowledge that business scandals are as old as time. Certainly during Hamilton’s time scandals were revealed and reforms instituted (e.g., Upton’s Sinclair’s 1906 book, *The Jungle*, disclosed atrocities in the meat-packing industry).

Today, sophisticated investigative reporting and 24-hour cable news networks heighten the public’s awareness of impropriety. However, feeling hopeless about the integrity of business leaders in general will merely cause people to give up livelihoods, communities and neighbors. There is no apparent evidence that the American people have adopted this attitude. OSH professionals must believe they can make a difference. If one assumes that safety efforts can bear fruit, then Hamilton’s lessons show how an OSH professional can make a difference—through persistence, persuasion and good science. **PSJ**

References

- Bellman, G.M. (1992). *Getting things done when you are not in charge*. Fireside.
- Cohen, W.A. (1990). *The art of the leader*. Prentice Hall.
- Garraty, J.A. & Carnes, M.C. (Eds.). (1999). *American national biography*. Oxford University Press.
- Hamilton, A. (1995). *Exploring the dangerous trades: The autobiography of Alice Hamilton, M.D.* American Industrial Hygiene Association.
- Hepler, A.L. (2000). *Women in labor: Mothers, medicine, and occupational health in the United States, 1890-1980*. The Ohio State University Press.
- Kotter, J.P. (1999). *John P. Kotter on what leaders really do*. Harvard Business Review.
- Moye, W.T. (1986). BLS and Alice Hamilton: Pioneers in industrial health. *Monthly Labor Review*, 109(1999), 24-28.
- Sergeant, E.S. (1966). *Fire under the Andes: A group of literary portraits*. Kennikat Press.
- Sicherman, B. (1984). *Alice Hamilton: A life in letters*. Harvard University Press.

This article originally appeared in the August 2004 issue of *Professional Safety* journal.