

2002

Dr. Phil, The Osbournes, The Shield and American Idol debut on TV.

January 9

U.S. Justice Department announces it will pursue a criminal investigation of Enron.

January 22

Kmart Corp. becomes the largest retailer in American history to file for Chapter 11 bankruptcy protection.

January 31

A large section of the Antarctic Larsen Ice Shelf begins disintegrating, eventually consuming about 1,254 sq miles over a 35-day period.

March 2

U.S. invades Afghanistan, launching Operation Anaconda.

May 3-5

Spider-Man sets a box office record, netting more than \$100 million during its first weekend in theaters.

TIME TO TRANSFORM?

Assessing the Future of the SH&E Profession

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THE SH&E PROFESSION is at a crossroads. While many firms have experienced an improvement in their safety performance, overall results have not been stellar. Fatal occupational injuries in private industry have exceeded 5,000 each year for the past decade (BLS) and industry's annual workers' compensation (WC) costs are in the billions. Furthermore, companies have experienced a sharp increase in WC rates as a result of the attacks on the World Trade Center (Marsh, 2002).

Despite these disturbing trends, many traditional safety programs remain, meaning SH&E practitioners are not viewed as part of the management team. The SH&E profession has two options: 1) continue

down the traditional road or 2) change direction and transform. This article explores warning signs for the profession, dissects current topics and recommends ways to transform the profession.

Learn from the Past, Prepare for the Future & Live Confidently in the Present

The Renaissance bridged medieval and modern culture. It was a revolutionary period in the arts and sciences that eventually changed the world. Before this, people accepted what they were told without question. During this "rebirth," breaks with tradition caused great change, marking the beginning of a modern world that developed rapidly over the next 400 years. Two and a half centuries later, the Age of Enlightenment introduced an important premise: Via proper education, humanity could change its nature for the better. More than a set of fixed ideas, the Enlightenment implied an attitude—a method of thought.

SH&E professionals can learn from these two periods in history. While the future looks increasingly complex, SH&E practitioners must take the steps needed to realize their true potential. As a society, the U.S. has been "at the cutting edge" of global change. Why has this not applied to the SH&E profession? Is

June 5

Elizabeth Smart is kidnapped from her home in Salt Lake City, UT. She is found and returns to her family in 2003.

Former U.S. President Jimmy Carter receives a Nobel Peace Prize.

November 14

U.S. Representative Nancy Pelosi becomes the first woman to lead a party in Congress.

November 25

President George W. Bush signs the Homeland Security Act, establishing the Department of Homeland Security.

July 28

Nine miners trapped for 77 hours in a flooded mineshaft in Pennsylvania are rescued and found to be in good health.

September 10

Switzerland joins the United Nations, becoming the 190th member.

October 4

"American Taliban" John Walker Lindh receives 20 years to life prison sentence for aiding the Taliban and carrying explosives.

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the safety professional consistently viewed as a positive change agent? This profession has yet to recognize that projections of current trends are rarely successful. Foresight and intuition, especially when combined with probability studies and quantitative analysis, are more effective as deliberate processes in expanding the understanding of tomorrow. "The goal of forecasts and predictions should not be to form an accurate picture of tomorrow, but to help us to make better decisions now" (Blumenfeld, 1999).

The article, "Philosopher's Stone: It May Take Another Monongah," refers to five tests which must be passed to signify that a new paradigm has arrived (Winn & Probert, 1995). These tests are 1) a critical event, 2) incommensurability, 3) tools, 4) language and 5) unmistakable culture change. The critical event is Sept. 11. Companies are looking at safety, emergency response and security in a different light. Therefore, SH&E professionals must discount current methodologies and embrace the "new safety culture." A new approach does not interact with traditional safety programs, it embraces a totally different mindset. Fortunately, SH&E practitioners are embracing concepts such as statistical process control, Pareto charts and common/special causes. Use of continuous improvement and benchmarks in everyday safety activities is another positive sign. Finally, practitioners must evaluate what is currently accepted and ask, "Should it be so?"

Warning Signs Manufacturing Industry

Various shifts are altering the future for SH&E professionals and the profession. American workers had a miserable time in 2001. More layoffs were announced last year than in any year since 1993 (MSNBC, 2002). The total approached 2 million lost jobs as the economy sunk into its first recession in a decade. The Sept. 11 terrorist attacks magnified the problem. The U.S. unemployment rate jumped to 6% in April 2002, the highest in nearly 8 years (CNN Money, 2002).

Traditionally, the best and most-well-paid safety

positions are with large companies. One-third of all extended mass layoff events (lasting more than 30 days and involving 50 or more individuals from a single establishment filing initial claims for unemployment during a consecutive 5-week period) in the private sector occurred in manufacturing industries in 2000 (BLS, 2001). Manufacturing layoffs were as high as the next two industries—services and agriculture—combined. With plant closings and continued shrinkage of the manufacturing industry, many safety positions will be eliminated. In addition, many work injuries occur in the manufacturing industry. Therefore, in a sector that has historically employed many SH&E professionals, there may be perceived a reduced need for their expertise.

SH&E professionals face other concerns as well. Companies in major industries are continuing to "flatten" their corporate hierarchy; information technology is making obsolete the work of middle management; and self-managed/team approaches are being used to solve problems. Prediction 24 in "Projecting the Next Decade in Safety Management: A Delphi Technique Study" suggests that "the U.S. will continue to lose heavy industry to developing countries" (Adams, 2001).

Human Resources Impact

Many human resources professionals have direct or indirect responsibility for safety—a trend expected to continue in coming years. Furthermore, during downsizing, SH&E jobs often fall to human resources personnel. It is important to recognize the distinct difference between the safety and human resources function, particularly with respect to academic preparation. Those who have earned a human resources degree have studied subjects such as training and development, compensation and benefits, and recruiting. A safety degree requires courses in areas such as safety legislation, engineering, safety management, fire protection and occupational health. These differences affect how each discipline will manage the safety function.

In a published review conducted by human

ASSE began publishing a journal in 1956.

To celebrate 50 years of keeping SH&E professionals current in this dynamic field, each issue of Professional Safety in 2006 will feature an article from a past issue of the journal.

The SH&E profession has two options:

- 1 continue down the traditional road or
- 2 change direction and transform.

resources managers, safety and health was identified as an activity that could be outsourced because it was “no value added” (Corporate Leadership Council, 1995). Further, an article in *Human Resource Management* shared results of a Delphi Method used by senior human resources professionals to rate content topic areas (Van Eynde & Tucker, 1997). Compensation and strategic roles of human resources management received high ratings, while human resources research, and safety and health were the lowest-rated areas. These are not good signs, considering the many SH&E professionals who report to human resources.

Lack of Integration

The safety function has created a culture of separateness by implementing programs that do not contribute to company goals and objectives. As noted, many firms continue to employ traditional safety programs that are isolated from the organizational mainstream.

Twenty years ago, NIOSH conducted a study on management and safety program characteristics to evaluate factors that had the greatest impact on safety results. This study clearly showed that traditional safety program elements such as safety committees, accident investigations and safety rules do not correspond with good safety results (NIOSH, 1979). A rulebook cannot possibly address all situations an employee will encounter. Safety committees, touted by traditionalists as vital, actually had a stronger correlation with poor accident results. This suggests that companies which employ traditional programs depend on the safety function for all aspects of the SH&E process. As a result, line managers ignore their role in the process and continue business as usual until something drastic occurs. While safety committees are plentiful, do companies have quality committees, productivity committees or human resources committees?

Also, discipline—a unique feature of safety—has alienated safety within most company cultures. Disciplinary procedures are a major component of many traditional approaches. In *Managing for World Class Safety*, disciplinary action is reported to be an important element of excellence in safety (Stewart, 2002). Some companies have a “zero tolerance” (mandatory termination) policy for breaking important safety rules. Does that policy apply to the vice president seen in the machine shop without safety glasses? Or the operations manager responsible for manufacturing who knows the press brake is not properly guarded yet does nothing? Discipline is a form of top-down command-and-control management. The typical result is defiance and anger, *not* improvement of the safety system. Injured workers have insight into the system that led to their injury; these workers should be viewed as valuable assets who can help to ensure continuous improvement of

the safety system.

Some safety practitioners employ scare tactics when they do not get desired attention. This approach does not provide a compelling reason to support safety nor does it bring lasting change. “In addition, [scare tactics] create a great deal of lingering resentment, lose their power with repeated use and contribute to the burnout of otherwise effective employees” (Downs, 2000). Ultimately, threats must become more aggressive in order to maintain their power to motivate workers. Conversely, appealing to employee needs for satisfaction and acceptance generates a persistent motivation—leaving no need for campaigns and separate programs.

Building a sound business case for safety initiatives is vitally important in today’s global climate. Safety should be viewed as a profit-center, not as a cost-center. SH&E professionals must convey to executive management that a safety system not only protects workers’ well being, but also has a positive impact on the bottom line. Company integration of safety is hindered by the use of traditional elements such as safety committees and disciplinary procedures.

No Skills Required

Safety programs can be purchased almost anywhere. This discredits the SH&E profession because it sends the message that it is cheap and easy to devise and implement a safety program. One-stop shopping has kept the phrase “safety is common sense” popular in the corporate environment. How can the safety function be viewed as a value-added resource when so many suppliers advocate purchasing a safety program? The perception is obvious and detrimental: No skill or decision-making ability is required when administering safety. Some suppliers have even developed “fill-in-the-blank” style safety programs.

Creativity is a dying concept in safety. SH&E professionals must be creative and must seek different ways to accomplish goals and engage employees. A *Whack on the Side of the Head* outlines 10 mental locks that are hazardous to thinking and, therefore, inhibit creativity (von Oech, 1998). These locks include always being practical, following rules and being afraid to make mistakes. Consider this scenario: A firm was searching for a full-time construction safety coordinator. Among other things, the position required a high-school diploma. The company had to inform the client of the coordinator assigned to the project within two weeks. After extending a job offer, the safety director discovered that the candidate had no high-school diploma. He brought this issue to his supervisor, the vice president of operations, who said, “It’s only a safety position, as long as he can read and write.” Sadly, many corporate executives share this view.

Formulating a plan for safety excellence requires strategic planning, technical competence and creativity. Accident causation requires a thorough understanding of factors involved in an accident—factors that are normally complex, multifaceted and difficult to identify. Unfortunately, too many safety

programs rely on quick fixes and shortcuts, which causes management to believe that anyone can oversee the safety and health process.

Shortcuts are perceived to be a timesaver—a way to reduce effort. Often, however, the shortcut takes more time and resources than doing the job right the first time. Remember when people suggested that use of personal computers would lead to a “paperless society”? Computers have improved lives, but PCs certainly haven’t created enormously helpful shortcuts. Some would argue that using a PC requires extensive training, costly maintenance, expensive software and technical support.

Similarly, many SH&E practitioners continue to search for a silver bullet to solve their problems. The phone rings, the product that will provide a quick fix to a pressing safety issue is explained and a purchase is made. When people are involved, there are no shortcuts and many skills are required.

The Wrong Message

One must look no further than *The Death of Common Sense* to see how the SH&E profession is perceived (Howard, 1994). The author contends that the OSH Act has failed since its promulgation in 1970. He describes how a company improved its safety performance by instituting safety contests. At the end of each quarter, workers without a lost-workday injury received prizes. The company then stepped up the campaign. It distributed a tax-free cash sum by lottery at the end of each quarter. These contests were intended to instill peer-group pressure to be careful. In the words of the plant manager, “The results were magical.” This is what the SH&E profession has been resigned to in the eyes of a best-selling author. Unfortunately, many managers and safety practitioners believe these contests work.

The wrong message begins at the undergraduate level, where heavy emphasis is placed on the regulatory aspects of safety and health. Financial and business principles are rarely used to prepare safety students for the real world. Regulatory interests focus on compliance, which masks the real problems in the workplace. By focusing efforts downstream, only symptoms are addressed, and solutions merely hide the real issues. Subsequently, the real problems continue unchecked—and often worsen.

Education in the 21st Century

An exploration of the annual number of master’s-level graduates in the core safety and health disciplines proves disturbing. Some 29 U.S. schools offer graduate-level degrees in occupational safety, with 300 students graduating annually, while 600 students graduate each year with baccalaureate degrees. Yet, less than 10 students receive doctoral degrees in occupational safety each year (Institute of Medicine, 2000). With many professors retiring, the low number of terminal-degree graduates threatens the viability of academic safety departments.

While these various warning signs should not be

viewed as the safety apocalypse, individuals within the safety and health discipline must map a course for change. Let’s examine current issues that require in-depth analysis.

Current Issues

Intrinsic vs. Extrinsic Rewards

When organizations seek only compliance from workers, they use extrinsic rewards such as money and tangible benefits. Such rewards do not come from the work itself. They are given by management to ensure that work is done properly and that rules are followed. Extrinsic rewards are a solution to motivation in the realm of compliance. Leave creativity, intelligence and initiative at the door.

In today’s business culture, motivational issues are more complex and demanding. Organizations can no longer offer guaranteed employment and a pension in return for worker loyalty and obedience. Good workers have more choices than before—and are more likely to explore these choices. Workers also have less supervision, which requires more commitment and initiative—characteristics that require deeper passion and satisfaction than extrinsic rewards can deliver. Today’s worker requires rewards that are a direct result of their work. Such intrinsic rewards may include pride in quality work, helping to meet a demanding deadline, or a sense that they are directly impacting company goals. Managing for such rewards is now an important element within the safety function.

This does not mean extrinsic rewards are unimportant. “Research shows that the two types of rewards often support each other” (Thomas, 2000). In the short term, extrinsic rewards are important; over the long term, however, employees need intrinsic rewards for optimal performance. The largest gains will come from a systematic improvement in intrinsic rewards. That is, making the work itself enriching and energizing so workers want to remain. Intrinsic rewards that stimulate the work environment include sense of choice, sense of competence, sense of meaningfulness and sense of progress (Figure 1). These examples are a set of conditions that allow workers to prosper.

Safety Performance Measurement

A junior safety professional was in the shop with his supervisor. The supervisor asked what the accident rates were for the manufacturing department. The young professional replied, “Not very good.” The supervisor kept observing and strolling without missing a beat. The safety professional continued, “Did you know that for every hour an employee worked in the shop last year, over 25 cents went to workers’ compensation?” The supervisor paused and turned to his safety practitioner. With a stunning glare, he replied, “You’re right, things aren’t very good.”



“SH&E professionals must be creative and must seek different ways to accomplish goals and engage employees.”

FIGURE 1

Intrinsic rewards help to stimulate the work environment

INTRINSIC REWARDS

Choice	Competence	Meaningfulness	Progress
<ul style="list-style-type: none"> • Trust in workers • A clear purpose • Information • Delegated authority 	<ul style="list-style-type: none"> • Positive feedback • Skill recognition • Knowledge • Challenge 	<ul style="list-style-type: none"> • An exciting vision • Relevant task purposes • Noncynical climate 	<ul style="list-style-type: none"> • A collaborative climate • Milestones • Measurement of improvement

Despite the efforts, the facility was cited for no protective devices utilized. OSHA recommended that the company provide a row of welding screens within a specific fabrication bay. The plant manager and safety coordinator contended that this was not practical based on the site's various welding activities. The officer said he understood their dilemma, but said he

Measuring safety performance continues to be a challenge. SH&E practitioners historically have had difficulty measuring their efforts and determining whether safety programs are effective. For many years, selected measures were inadequate and ineffective. The three popular techniques are WC costs, incidence rates and safety audits—each an example of traditional safety and an after-the-fact measure that does not equate to process improvement.

In many cases, companies employ the following logic: If OSHA considers recordables and lost workdays important, then so should we. Yet, few people understand accident statistics. Accident rate terms punctuate an SH&E professional's vocabulary, but mean little to senior management. Managers feign understanding to avoid being viewed as apathetic, but remember, these managers did not reach their positions because they understand accident rate concepts.

SH&E professionals have a difficult time measuring in dollars, a universal performance indicator. Therefore, recordable and lost-time incident rates do not stand a chance in the corporate setting. Most businesses take these measures to the extreme, attaching various incentives to recordables and days without a lost-time case. Throw in WC language (e.g., EMR) and members in the organization become really confused.

Some companies measure line (project) managers by their department (project) safety performance. These firms have done a poor job communicating how these rates are calculated, which can lead to paranoia, fear and resentment. These emotions do not contribute positively to long-term safety improvement.

OSHA & Workplace Safety

A sheet metal company in the Midwest had an OSHA inspection. Its primary business was paint spray booth fabrication, which involved welding activities. These activities were not performed at fixed locations, but were conducted in various areas throughout the shop on any given day. The company provided appropriate eye protection; welding screens were strategically located throughout the shop; and no flashburn incidents had occurred in more than 2 years. All employees were properly instructed on eye safety and the company had a well-documented PPE assessment for all activities.

couldn't do anything. This company had two options: 1) apply for a variance or 2) appeal the citation. This scenario illustrates OSHA's rigid, chapter-and-verse approach to inspections.

According to the General Accounting Office (GAO), OSHA does not have the necessary data to determine whether its consultation program is effectively contributing to its mission of reducing workplace injuries and illnesses (OSHA Fails, 2000). The report suggests that OSHA strengthen the management of state consultation programs. Funding for these programs increased more than 50% between fiscal year 1996 and 2001. Yet, employer requests for consultation visits rose only 4% during that same period. Even OSHA and state consultation officials admit that the agency's data-collection system for measuring program effectiveness is "burdensome and inefficient." To compound the problem, OSHA's funds-allocation process does not consider performance. From 1996 to 2001, the GAO stated that all state programs received funding increases, but 16 states actually lowered their activity during that period.

As a result of OSHA's emphasis on recordkeeping, improving the numbers often takes on greater importance than improving safety outcomes. This is a result of employers trying to avoid fines and citations. Statistics can be manipulated by employers that prefer "fudging the books" to systematically evaluating factors that contribute to incidents. In 2000, an average of 17 workers were fatally injured each day (BLS). These statistics do not include deaths from occupational diseases, which reportedly claim the lives of an estimated 50,000 to 60,000 workers each year (AFL-CIO, 2001). One must look no further than the chilling coal mine blast in Alabama (see sidebar, p. 67) to realize that much work remains to be done throughout the SH&E profession.

While OSHA can be proud of its performance standards, VPP sites and Harwood grant program, too many glaring weaknesses continue to shine through. The function of government should be to work with business, not to be its adversary.

The Great Debate

Who is responsible for workplace accidents—employees (who commit unsafe acts) or management

(who provides unsafe systems)? This may be the most-debated subject in the SH&E field. Heinrich established the theory of accident causation for the safety profession—leading to axioms that have served as the profession’s paradigm for many decades. The most lasting of these axioms is familiar to most SH&E professionals: 88% of all injuries are caused by unsafe acts, 10% are due to unsafe conditions and the remaining 2% are unpreventable.

This axiom continues to have an overwhelming impact, some 70 years after Heinrich’s original work was published. Today, managers, academia and many SH&E practitioners espouse this outdated (and unsupported) axiom, which, in the author’s opinion, equates to contributory negligence. Although WC acts have declared the principal of contributory negligence legally dead, it remains alive in the safety profession. Heinrich’s theories were promoted by the insurance industry. Many safety programs were established and implemented in traditionally managed organizations—organizations based on command-and-control decision making, a premise of traditional management and the traditional safety paradigm, none of which encourage creativity and innovative ideas.

Some behavior-based safety supporters suggest that in most cases—80% to 95%—accidents are caused by unsafe behavior (Krause & Hidley, 1990). One must assess this statement within the parameters of a system, although many behaviorists have now modified their safety management approach. This new approach incorporates effective safety management strategies (and gives the impression that these strategies were always included in their teachings).

Don’t expect people to change their behavior unless you change what they do. “Their work must be designed to allow them to act differently” (Champy, 1996). Simply, the process designed and controlled by management is responsible for an overwhelming majority of all outcomes. What or who is responsible for plant closings? Is it poor workmanship by unmotivated workers? Nothing is further from the truth. Many plants that have closed performed near optimal efficiency, maintained positive relationships with suppliers and had good interdepartmental communications. What happened is the plant produced a product and service that lost its market share. Corporate strategies fell flat as customer and market demands shifted. Management failed to forecast properly, analyze market trends and make the necessary product change.

The same concept applies to quality and safety, where the output is a direct result of decisions made by senior leadership. Essentially, management makes the mistakes, not the employees. Safety is a result of boardroom issues that are not effectively handled by safety committees and human resources.

Those inside the good-to-great companies were often unaware of the magnitude of their transformation at the time; only in retrospect did it become clear. They had no name, tag line, launch event, management fad or program to signify what they were doing (Collins, 2001).

So, what must be done proactively to position the SH&E professional and profession for future prosperity? Let’s take a closer look at strategies that can transform the profession. Some may view these recommendations as radical.

The Road to Transformation Educational Excellence

The foundation for any transformation inevitably will rely on educational excellence (Figure 2). This excellence requires not only that professionals obtain bachelor’s, master’s and doctoral degrees, but also that they obtain advanced professional development. Some argue that not everyone can obtain a CSP or CIH, and others say, “I should not have to prove myself after 20 years of experience.” SH&E professionals must take the outlook that their future rests considerably on their professional development and technical skills. Highly competent people continually search for ways to learn, improve and grow by asking, why? “The person who knows how will always have a job, but the person who knows why will always be the boss” (Maxwell, 1999).

In *Post-Capitalist Society*, Drucker stated that the world is in transition to a knowledge-based society and that the primary skill in the postcapitalist society will be knowledge. He added that the leading social group will be knowledge workers. It is safe to say that anyone with knowledge will have to acquire new knowledge on a frequent basis or become obsolete (Manuele, 1997).

Alabama Coal Mine Tragedy

In an eerie aftermath of the Sept. 11 catastrophe, 13 coal miners lost their lives at the Jim Walter Resources’ Coal Mine No. 5, outside Brookwood, AL, when, similar to New York’s famed rescue workers, they rushed toward danger to save the lives of coworkers. In remarks delivered at the memorial service for the dead miners, Labor Secretary Elaine Chao compared the mine to ground zero where the World Trade Center once stood. Chao called it the “worst mining disaster in decades.” Not since the Wilberg, UT, disaster of 1984 had so many coal miners lost their lives in a single incident.

The first of two explosions on the night of Sept. 23, 2001, killed three men instantly and injured four miners; three were quickly evacuated, but a fourth was unable to move. Nine other miners were rushing to the area to help that worker. A second explosion followed shortly. Twelve miners perished in the blast and were buried in debris. A thirteenth worker escaped, but died the next day in a hospital from severe burns.

A team of 32 miners had been working to reinforce the ceiling in a section of the mine located more than three miles from the main mine elevator and about 2,000 ft from the ventilation shaft that might have been used to escape. Attempts to recover bodies of the miners buried in the nation’s deepest mine (2,140 ft) continued for weeks after the explosions, with efforts delayed by underground fires and dangerous concentrations of methane and carbon dioxide.

For SH&E professionals to thrive in today's environment, they must obtain new and continuous knowledge. Companies will demand employees who have broader skills and knowledge in several areas. The days of specialization are gone. Not only must SH&E practitioners be well-versed in safety disciplines such as ergonomics and system safety, they must also have working knowledge of quality, finance, law and facilities management. Resting on current laurels is a prescription for hard times. Safety practitioners have an opportunity to be change agents—to help their employers realize economic optimization. Those who are problem solvers, have multiple skills and demonstrate results woven into the organization's financial goals will be viewed as a valuable asset.

Information should not be confused with knowledge. Information is everywhere thanks to the Internet, newspaper, television and radio. Many people charged with safety as a collateral job responsibility mistake information on websites and other sources as knowledge. Scanning newspapers, watching news updates and surfing safety websites only provides information. Knowledge comes from theory—usually gained through formal education and application.

Many SH&E professionals function well with formal education at the nonterminal degree level, but a major need exists for doctoral-level safety professionals. Although few industries may require safety professionals with doctorates, such individuals are needed to conduct critical research on injury prevention and to ensure the continued viability of undergraduate and graduate academic programs. For the profession and practitioners to thrive in the future, a new cadre of Ph.D. researchers and educators must be sought. Several universities are striving to meet this challenge (Myers & Winn, 2001). But what about options for employed safety practitioners who want to obtain an accredited doctorate? The profession must explore and identify avenues for these professionals. A task force must be created to develop an action and implementation plan to make this a reality.

Communicate to the Masses

Until recently, SH&E professionals have done a poor job of promoting the profession. Many professions and organizations (such as accountants and lawyers) have gained recognition via considerable promotional campaigns. Public relations is a critical aspect for transforming the profession. While many safety practitioners have long stated, "We are in the business of protecting people and property, not self-promotion," early returns suggest that the ASSE public relations effort is paying huge dividends.

The SH&E profession has struggled for recognition since its beginnings. It is no different today. Growth in the profession and its professional societies has been flat in recent years. Universities that offer safety-related degrees have experienced downward trends in enrollment. High school students are not aware of the SH&E profession. How can the profession be transformed when high school students and the population at-large know little about the safety discipline?

This general lack of awareness must be reversed.

All SH&E professionals must promote safety and encourage students and practitioners to enter the field and/or join professional safety societies. Scholarships help educate college students about the profession, but the process must go one step further to the high-school level. The purpose is to prepare the next generation of SH&E professionals. Many schools sponsor career days that allow students to "tag along" with a professional. How many SH&E practitioners have taken a high-school student along with them to their place of employment?

The safety message—including benefits and value—must be sustained, concise and convincing. Dialogue must occur frequently between Fortune 500 senior executives and SH&E professionals. The dialogue should include discussions on what senior managers view to be the role of SH&E practitioners. Currently, too much time is spent "preaching to the choir" instead of having quality dialogue with executives and media. Since few business schools incorporate safety into their curriculum and CEOs have various backgrounds (Figure 3), safety professionals must fill the void by educating them about safety and its bottom-line impact. Senior executives and other business leaders support traditional approaches because that is what they know—it is what they see in practice and advertised in journals and magazines.

A Unified Voice

A safety professional with a major retail company in Ohio met with his supervisor. He spent several hours preparing for the meeting since he had not interacted with his boss in almost two weeks. He outlined the important items he wanted to discuss: Six-sigma training and how it coincides with company objectives and his desire to obtain an advanced safety degree.

The operations director entered the conference room and apologized that his hectic schedule had prevented him from attending the recent safety meeting. The safety professional gave a slight nod and started the dialogue. He handed the supervisor several invoices and supporting documents. The invoices were renewal statements for a safety certification and professional association. The supervisor appeared puzzled and asked, "Didn't I approve this certification fee renewal last month and the annual association dues recently?" The safety engineer sheepishly replied, "Yes, but they were for my other certification and association fees." And that is only half the battle.

The certification for engineers is the professional engineer (P.E.). Accountants are recognized by the certified public accountant (CPA), while nurses, human resources and other professions have their own defining certification and/or registration. Scan the SH&E profession and one will find many certifications—CSP, CHCM, CHMM, ARM, CIH, REM, REP, OHST, CHST. Within the profession, some certifications are recognized more than others, but do legislators, CEOs, newspaper editors and others outside the profession know the difference between a CSP and CHCM? Furthermore, the CSP designation

SAFETY PROFESSIONAL CHARACTERISTICS

Safety Professional of **YESTERDAY**

Perceived: A “burden”

Organizational Alignment: No one cares or no thought goes into who supervises safety

Interests: Posters, days without a lost-time accident board/sign

Characteristics:

- Specialists (fire, industrial hygiene, safety)
- Minimal planning
- Puts out fires (knee-jerk reaction)
- Conducts inspections via predetermined form/checklist

Safety Professional of **TODAY**

Perceived: Compliance-oriented

Organizational Alignment: Reports to a director (manager) or shared services function—probably human resources

Interests: Incentives, behavior-based safety, disciplinary procedures

Characteristics:

- Generalist—SH&E
- Short-term planning
- Relies on recordable/lost-workday incident rates
- Chairs safety committee
- Uses audits that parallel the regulatory process

Safety Professional of the **FUTURE**

Perceived: Value-added business leader

Organizational Alignment: Accountable to senior executive who completely supports SH&E process

Interests: Six sigma, financial principles, systems thinking, values-driven safety

Characteristics:

- M.B.A., Ph.D.
- Knowledgeable in all aspects of organization
- Relies on variation (common/special causes)
- Facilitates safety process
- Uses employee feedback for continuous improvement

is not unique to this profession. CSP also stands for certified speaking professional—someone who is a member of a professional association, has met professional education requirements and adheres to professional business management standards.

Simply put, too many safety associations and certifications are available. While the trend is to integrate and consolidate, the SH&E profession tends to add organizations rapidly while practitioners seem eager to place new letters after their names. Is this good for the profession? Associations/societies must join forces, and the profession must strive to publish white papers about the many “fraud” certi-

fications that contaminate the profession. Professional societies and credentialing entities must ensure that practitioners are eligible or qualified to apply for a designation only after they have met minimum requirements. These include having a certain level of education and experience, and commitment to a code of ethics, as well as other relevant requirements such as passing an examination (Hale, 2000). Also, certifications that meet stringent requirements and are accredited by organizations such as the Council of Engineering and Scientific Specialty Board ensure credibility. Too many certifications simply do not meet these rigorous requirements.

FIGURE 3

Know your business leader



CEO EDUCATIONAL BACKGROUND

Degree	Prevalence
M.B.A.	29%
B.A.	17%
B.S.	14%
No college degree	10%
Ph.D	9%
M.S.	8%
J.D.	7%
L.L.B.	5%
M.D.	1%

Source: 1998 Forbes Survey

“SH&E practitioners who are problem solvers, have multiple skills and demonstrate results woven into the organization’s financial goals will be viewed by the corporation as a valuable asset.”

Rebuild the Foundation

The SH&E profession was built around the principles of Heinrich’s axioms—principles that are no longer valid. The 88-10-2 theory can no longer be held as gospel in the realm of safety because no body of research supports its validity.

The following scenario illustrates another dilemma. A group of safety practitioners attended a Chamber of Commerce meeting. At the start of the meeting, each was asked to describe his/her job responsibilities and the safety function. Each offered a different response, prompting one CEO to reply, “Sounds like people in safety do their own thing.” In essence, the SH&E profession has not established a common definition of safety practice nor a common terminology to explain what practitioners do. The medical and law professions have specific requirements to practice in their respective disciplines. The SH&E profession must define who it is and what its members do.

It should also be noted that the five professionals had different titles—safety engineer, senior safety engineer, safety coordinator, safety director and safety specialist. A financial consultant at the meeting asked, “What differentiates a safety engineer from a senior safety engineer?” Before a reply could be given, he quipped, “Is it because you have Sr. at the end of your surname, and he doesn’t?” Everyone laughed—except those in safety.

Excellent communication is a must to be considered a professional. But it may not be enough. If executives do not perceive the safety discipline as professional, effective communication skills will not suffice. The word “safety” is not clearly defined and is often misused, which illustrates the vital issues confronting the profession. Terms that are part of the safety vernacular—unsafe act, think safety and safety first—do not promote the profession well in boardrooms. Safety jargon is often considered irrelevant, shallow and inconsistent with standard business terminology or business objectives. To be heard, SH&E practitioners must speak the language of business.

The foundation on which safety is built needs a different look. A slightly rebuilt or “patchwork” foundation is not enough. Total reconstruction is required if the SH&E profession is to reach new heights and become a recognized, respected profession. SH&E professionals put out fires and solve difficult problems each day, but these activities will not lead to continual improvement of safety systems.

The safety leaders of the 21st century will be individuals with broad experience and in-depth knowledge in multiple subjects. The breadth of experience comes when SH&E professionals are cross-educated—not cross-trained—in multiple areas of the organization. Experience is gained over time and everyone wins in this scenario.

Traditional Safety Laid to Rest

Journal articles and conference presentations advocate the need to “breakaway” from traditional safety management, yet many practitioners believe that if it’s not broken, don’t fix it. These practitioners will die by that philosophy. Almost 10 years ago, a call was made for a “revolution in safety management” (Hansen, 1993). The challenge was issued to move away from traditional safety elements such as safety committees, safety meetings, safety rules, posters, campaigns, slogans and incentive programs. As Tom Smith once said, “You cannot inspect safety into the system.” SH&E professionals must ask, “Why can’t I turn away from traditional thinking even when it is evident that this approach will not equate to sustained positive results?”

Early drivers of traditional safety programs were insurance companies. Compulsory WC proved to be a boon to that industry—it had a product based on losses that promised to be lucrative. While some states established and administered their own insuring funds, most opened the market to commercial firms (and some opted to use both plans). Regardless, program development was similar. As noted, Heinrich’s axioms were promoted, causing traditional elements to be woven into the fabric of these organizations.

Some insurance companies now help companies improve management effectiveness and achieve culture change—they are a welcome sight. Culture change can only be accomplished by adopting a completely different mindset. One example is how corporate America ranks employees for salary increases. Known as the merit system, this approach tears at the heart of teamwork and continuous improvement.

Consider a department that has four employees, each of whom is a high achiever who exceeds expectations. The company states that each department manager must rank employees and place the top performer(s) in the upper 25% (4% to 5% merit increase); half the department must be ranked and placed in the middle 50% (2% to 4% merit increase); and low performer(s) in the bottom 25% (zero to 2% merit increase). Obviously, this manager faces a major dilemma. How does he rank a high achiever in the bottom 25% and classify that employee as a low performer?

Traditional safety management is an extension of

this approach. It relies on EMRs, incident rates and other measurable indicators as a basis for company and industry benchmarks. SH&E professionals must stop using ineffective and antiquated safety tools. Traditional techniques no longer suffice. "In place of judgment of people, ranking them, putting them into slots (exceeds expectations, meets expectations), the aim should be to help people optimize the system so that everybody will gain" (Deming, 1994).

Conclusion

Despite major strides made by major safety associations/societies, accrediting and certifying bodies, academia and visionary safety leaders, the SH&E profession continues to be primarily known for inspections and safety glasses. SH&E professionals cannot continue to operate in crisis management mode. Often, action is taken too late, allowing others to define the profession and determine its future. Figure 4 outlines strategies to help the profession and its practitioners during the transformation process. Those in safety must shift from their traditional roles and past approaches to add value to business and its new climate. This "new" philosophy requires that the total organization be involved in continually improving the work system. This philosophy cannot be implemented in just one department or by the safety committee.

Safety has operated under an outdated set of principles for too long. The warning signs are clear, the current issues have been defined. Now, the transformation must begin to ensure future prosperity. What lessons were learned from the Renaissance and the Age of Enlightenment? ■

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FIGURE 4

Shifting from traditional roles

THE ROAD TO TRANSFORMATION

The safety profession must . . .

- Devise options for safety professionals to continue their education at the doctoral level.
- Have a sustained, concise and convincing safety message.
- Maintain minimum accredited certifications.
- Clearly define the profession.
- Promote activities that will advance itself (governmental affairs, public relations, education).

The safety practitioner must . . .

- Continually seek professional development opportunities.
- Promote the profession to senior executives.
- Seek accredited certification(s).
- Acquire broad experience and in-depth knowledge in multiple subjects.
- No longer use traditional safety elements.

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