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# Seven key points for improved safety performance **By Earl Blair**

**ARE SH&E PROFESSIONALS LEADING CHANGE** in safety or are they being "managed" by the existing culture? Leadership and culture are basic concepts for improving safety performance. The two are inextricably linked and must be studied together to be relevant (Schein 5; Sarkus 26). This article explores seven key points with the potential to provide SH&E professionals with a clear picture of their role as leaders.

#### **Key Point 1: The Concept of Safety Culture** Must Be Practically Defined to Be of Value

A useful definition of safety culture as a product is "that observable degree of effort by which all organizational members direct their attention and actions toward improving safety on a daily basis" (Cooper 31). Safety culture can be visualized as a reciprocal triad, adapted from Bandura's model of reciprocal determinism [Bandura(a)]. The three sides of the model include the organization (safety system), the person (safety climate) and the job (safety behavior) [Cooper(b) 33]. Cooper adapted Bandura's model of reciprocal determinism for safety culture and explains:

People are neither deterministically controlled by their environments nor entirely self-determining. Instead they exist in a state of reciprocal determinism . . . whereby they and their

associate professor of safety management at Indiana University in Bloomington. He has more than 20 years' experience in safety with positions in four Fortune 500 companies, consulting in behavioral safety and teaching safety management courses at three universities. He holds a B.A. in Psychology from Asbury College, an M.S. in Safety Management from West Virginia University and an Ed.D. in Vocational Education from the University of Kentucky. A professional member of ASSE's Central Indiana Chapter, Blair received a Professional Paper Award from the Society in 1997. 119].

Earl Blair, Ed.D., CSP, is an environments influence one another. Bandura emphasizes that reciprocity does not mean the different sources of influence are of equal strength, neither do the reciprocal influences occur simultaneously. . . . This bi-directionality means people are both products and producers of their environment [Cooper(c) 118-

Cooper further explains that Bandura's model appears to offer the perfect framework to analyze safety culture because it reflects the psychological, behavioral and situational elements that mirror many accident causation relationships. "It [Bandura's model] contains three elements which encompass subjective internal psychological factors, observable ongoing safety-related behaviors and objective situational features" [Cooper(c) 120].

Similarly, safety culture is understood as a system or a process involving four elements: 1) inputs; 2) process activities; 3) outputs; and 4) results. Inputs involve basic assumptions; the process includes values and activities; output is the product; and the results are the performance (Figure 1).

This model can clarify misconceptions about the "causes" of workplace injuries. For example, it is often assumed that workers' "bad attitudes" (input) lead to unsafe behaviors (process) causing injuries (output) resulting in poor safety performance. But a proper understanding of the model reveals that attitudes are an output—not an input—of the safety culture process. Poor leadership and management lead to unsafe processes and are one cause of poor attitudes (Stewart).

Framing safety culture in this way shows safety as a process rather than a program; it is a simple way of viewing a rather complex reality; and it lends itself to the ability to improve the system.

Interpretation/Implications: Defining and viewing safety culture as a process helps SH&E professionals clarify safety issues and pinpoint problem areas.

#### Key Point 2: Safety Culture Is an Integral Part of the Larger Organization

Organizational culture can help or harm safety efforts. An organization's culture is more powerful than any individual. Krisco notes "because the culture dictates what's important, who's important, and what it takes to be successful, it has enormous impact on the organization's future direction. In short, it's

# Figure 1 Safety System Excellence



impossible to substantially change the direction of your enterprise without changing the culture" (105).

Safety culture can be difficult to change, especially if the larger culture does not support needed changes. For example, "if a basic assumption is strongly held in a group, members will find behavior based on any other premise inconceivable" (Schein 22). To expedite changes, the change effort must be in alignment with the site culture.

Recognition of the influence and strength of the existing site culture is important for the SH&E professional trying to initiate change. An understanding of basic underlying assumptions can help prevent needless frustration and wasted efforts. Since it is nearly impossible to change the underlying assumptions, behavior change is the primary focus.

**Interpretation/Implications:** The safety function is not an island isolated from the influence of the broader organization and its culture. One must understand the existing culture before trying to improve the safety culture.

#### Key Point 3: Safety Culture Can Be Quantitatively Measured

Cooper's research demonstrates that safety culture can be measured with existing assessment tools and measures. [See Cooper(b) and (c)]. It can be measured in a comprehensive manner from the reciprocal elements of the triad [Bandura(b) 5-7]. These three elements and available assessment tools are:

•Person: perception surveys, employee interviews. •Situation: safety audits, measurement of the safety management system.

•Behavior: behavioral sampling.

These elements can be measured directly or in combination, which enables one to quantify safety culture in a meaningful way [Cooper(b) 34]. Two relatively simple requirements are needed to effectively quantify safety culture across the three reciprocal elements:

1) Measurement of "matched" factors within each element of the model. For example, one might measure management commitment in a safety audit, then compare it to a question about the safety budget in the perception survey, and to management behaviors in the behavioral area.

2) Use a common metric, such as percentages, across each element. Most scores can be easily converted to percentages. A five-point banding scale based on 20 percentage point spreads is also effective [Cooper(b) 34].

This approach is beneficial in part because it pro-

vides a focus on all three sides of the reciprocal triangle. Deming emphasized that total quality can only be achieved through a systems approach (Deming). The same is true for safety excellence, where the systems approach involves focusing continual attention on all three sides of the triad: person factors, organization factors and behavioral factors [Blair(b) 267].

**Interpretation/Implications:** Leadership and management are both art and science. Quantitative measures contribute to a more scientific approach to safety culture development.

#### Key Point 4: Leadership Must Share a Vision for Establishing Safety Excellence

Cultures are created to a great extent by leaders. Leadership is the most powerful component of culture (Simon and Carillo 268). As noted, "Leadership and culture are inextricably linked. Leaders affect change, which in turn creates and sustains an organization's culture" (Sarkus 26). A poor safety culture implicates poor leadership.

Cooper states, "Leadership is generally viewed as the key determinant of organizational success in all its various endeavors" [Cooper(a) 36]. Leaders create the vision and strategies. They "establish the vision for an organization; managers are the key to making the vision a reality" (Settles 626).

Literature is full of formulas or lists of characteristics (such as enthusiasm or charisma) of effective leaders. While these may be generally useful traits, leadership is situation-specific—the characteristics needed are dependent on the situation. "The search for a universally correct leadership style is doomed to failure because of cultural variation by country, by industry, by occupation, and by the particular history of a given organization" (Schein 135).

Management deals mostly with maintaining the status quo; leadership deals mostly with change (Kotter 165). Positive culture change is up to leadership, but most leaders are not aware of how much the assumptions they take for granted are reflected in day-to-day behavior by the way they manage the decision-making process (Schein 122).

Larry Hansen admonishes SH&E professionals to encourage safety leadership. "Management does not make a difference in occupational safety and health . . . the American workplace needs leaders with . . . a willingness to cause change" (L. Hansen 22). Mark Hansen states, "Leaders are champions for change" (M. Hansen 72).

Interpretation/Implications: To create the great-

# Leadership Behavior: Seven Es for Establishing Safety Excellence

# Establish Expectations

Leaders establish expectations and accountabilities for safety through clear vision and communication.

## **E**ngineering Support

Ensure that engineering concerns are handled as priorities designated in the hierarchy of controls.

## **E**xemplary Behavior

Leaders set a personal example of the behaviors required for the desired safety culture.

# Educate Employees

Leaders provide education, training and resources to ensure that employees are fully developed and prepared to contribute to safety excellence.

# **E**nable Employees

Leaders grant employees authority, flexibility and partnership once they are educated and properly prepared to fulfill those characteristics.

## **Encourage Employees**

Leaders encourage everyone at all levels by positively reinforcing desired behaviors. They also encourage self-efficacy. "Self-efficacy ('the capacity to exercise control over one's own thought processes, motivation and action . . .') is fundamental to proactive safety cultures" [Blair 26 (a)].

# **E**valuate Effectiveness

Leaders measure and evaluate the effectiveness of their organizational strategies and make needed adjustments.

est impact on safety culture, the SH&E professional should be more of a leader and less of a manager (Garner and Horn 112).

### Key Point 5: Leaders Must Focus on Specific Behaviors to Strengthen Safety Culture

Krisco states, "When people talk about culture change, what they really want is behavior change. When someone talks about changing the culture, what most people hear is 'changing core beliefs,' which is nearly impossible" (110). The key is to speak about changing behavior, not the basic beliefs that underlie those behaviors. Leaders must pay attention first to their own behavior, then to that of their employees. Let's assess what general behaviors impact safety excellence for leaders.

## Seven Es for Establishing Safety Excellence

1) **Establish expectations.** Leaders need to translate their vision into clear expectations and accountabilities. Examples of establishing expectations and accountabilities include:

•Intervene as a safety coach (Geller 239+). Such a person makes a positive difference in someone's life. According to Krisco, "most organizations are over managed and under led, and coaching is almost totally missing" (61).

•Create and sustain a viable future for safety improvement through their conversations. Krisco offers this example to illustrate the power of conversation to create the future by establishing expectations: Back in the sixties, President John F. Kennedy announced that we would put people on the moon and safely return them to Earth by the end of the decade. You may not have been born then, but if you were, you may recall that when President Kennedy made that statement there was little evidence that a manned lunar landing was even remotely possible. The Russians had completed several successful space shots. America was behind in the space race. We could barely get a rocket off the launch pad, let alone put someone on the moon. Many scientists at the time said a moon landing was impossible because we didn't have the fuel and computer technology to make it happen. However, the world watched in awe when on July 20, 1969, astronaut Neil Armstrong took that "giant step for mankind" and planted an American flag on the moon. Without discounting the monumental effort put forth by NASA and others, putting a man on the moon can be traced back to that single statement Kennedy made on May 25, 1961. John F. Kennedy literally spoke a manned lunar landing into existence. If he, or some other leader, had not made that promise, it would never have happened (40).

•Establish accountability for safety performance at all levels of the organization. "The success of . . . safety and health management systems depends upon the management team being held accountable for performing or not performing their tasks. This also holds true for employees . . . in every element of [OSHA] VPP this is emphasized over and over" (Garner and Horn 138).

Petersen supports the importance of accountability for safety:

What is the answer to safety system excellence? The behavior-based people are right—you cannot achieve safety excellence without proper behaviors. But, the culture builders are right also, for you cannot get the proper behaviors without the right culture. And here's the real hooker—you cannot get the right culture without accountability. It is not one or the other you must build all three—and in the proper order to achieve excellence in safety (126).

Management accountability requires a system of role definition, correct measures of performance and adequate rewards contingent on performance. Proactive actions such as these build a culture which says safety is so important that all managers and supervisors have to do something about it every day (Petersen 126).

2) Engineering support. Leaders should ensure that safety-related engineering concerns are handled as priorities. The hierarchy of safety controls designates the most effective methods of safety intervention: 1) hazard elimination; 2) safeguards and enclosures; 3) warnings and instructions; and 4) protective clothing and administrative controls. "The hierarchy recognizes that design, elimination and

engineering controls are more effective in reducing risk than lower level controls such as warnings, training, procedures and personal protective equipment" (Howe 240+).

When possible, organizations should attempt to eliminate, engineer and guard against hazards. Behavioral approaches must not be used to abdicate management responsibility; they must be used to enhance—not replace—the traditional hierarchy of interventions [Blair(b) 269+]. Experience shows that employees are less likely to meet expectations if management takes no responsibility for correcting potential safety hazards through feasible engineering methods.

3) **Exemplary behavior.** Leaders set a personal example of behaviors required for the desired safety culture. They must follow established safety rules and regulations, and must participate in safety meetings and regularly discuss safety in their conversations.

Cooper states that "effective leadership of safety requires senior managers to develop and implement a strategic plan for safety that captures the hearts and minds of employees, personally demonstrate excitement and enthusiasm for the changes, and *model* the behaviors others are expected to follow" [Cooper(a) 38, emphasis added].

4) Educate employees. Leaders provide education, training and resources to ensure that employees are fully developed and prepared to contribute to safety excellence. In *Managing the Risks of Organizational Accidents*, Reason discusses four subcultures that influence the safety culture, one of which is a learning culture. According to Reason, a learning culture is "the willingness and competence to draw the right conclusions from its safety information system, and the will to implement major reforms when their need is indicated" (Reason 196). He believes the components of a learning culture—along with a reporting culture, a just culture and a flexible culture—result in an informed culture.

5) **Enable employees.** Leaders grant employees authority, flexibility and partnership once they are educated and properly prepared to fulfill those expectations. Often, management is unwilling to share power and authority with workers. Leaders must establish a trusting climate so that all injuries and potentially severe near-hit cases will be reported. Reporting must be held as a higher value than retribution or punishment. High participation in reporting is important because it is impossible to correct problems if no one knows they exist (Garner and Horn 143).

6) Encourage employees. Some 350 years ago, Musashi wrote, "The foreman should take into account the abilities and limitations of his men, circulating among them and asking nothing unreasonable. He should know their morale and spirit, and *encourage* them when necessary" (42, emphasis added). Leaders encourage self-efficacy, which is "the capacity to exercise control over one's own thought processes, motivation and action" and is fundamental to proactive safety cultures [Blair(a) 26]. Research demonstrates that subjects who score high in self-efficacy tend to be high performers [Bandura(c) 122+]. Effective leaders encourage everyone at all levels by positively reinforcing desired behaviors. Research has shown that one of the things leaders do is positive reinforcement. Daniels notes:

Most leadership research is based on what leaders say they do. Dr. Judith Komaki is one of very few people who has done research on what leaders do. What Dr. Komaki found is that the most effective leaders, managers and supervisors do not necessarily reinforce more often than the ineffective ones. What they do is reinforce while people are performing. . . . When reinforcement is immediate, you know what you are reinforcing because it is happening before your eyes (70).

7) Evaluate effectiveness. Leaders measure and evaluate the effectiveness of their organizational strategies, then make needed adjustments. Continuous improvement in safety requires that a company

measure, evaluate and make appropriate adjustments as necessary. These behaviors should be part of an established system—not simply something leaders may occasionally decide to practice.

Interpretation/ Implications: Leaders' conversations, behaviors and visible support play a major role in establishing and changing organizational culture. The best way to encourage such behavior Five Steps to Changing a (Cultural) Behavior

1) Acknowledge the belief and the importance of the belief underlying the cultural norm.

2) Acknowledge the existing practice or behavior that follows from that belief, and (verbally) put it in the past.

3) Advocate a new behavior or practice following from the basic belief.

4) Remove the old practice or behavior, clearly stating that it is no longer the norm.

5) Ensure leadership does what it has promised to do (regarding the change).

*Source: Adapted from Krisco, K.H.* Leadership and the Art of Conversation: Conversation as a Management Tool.

is to make it part of the management system.

#### Key Point 6: Leaders Need Both "Want To" and "Know How" to Establish Excellent Cultures

When discussing behavioral safety, union leaders and SH&E experts often ask, "What about management behavior?" Leaders must possess both the desire to act and a clear understanding of the specific behaviors that lead to excellent safety cultures. "Top management must be committed to excellence and drive the agenda by establishing a vision, values and goals, and by seeing that all line managers have safety improvement objectives; by auditing performance; and by visible personal involvement" (Stewart 81).

Ideas about leadership are evolving. Carly Fiorina, CEO of Hewlett-Packard Co., says, "Leadership is no longer about command and control, hierarchy, title or status; it's about encouraging, enabling and empowering employees" (Horsfall 17). Understanding how the future is created is the most fundamental of leadership skills. The essence of leadership is creating a sustainable and viable future (Krisco 17). The sidebar on pg. 21 presents five steps to changing a behavior.

The SH&E professional must influence site and corporate leaders and line management to establish a safety culture.

#### Key Point 7: The SH&E Professional's Role— Influence the Right People to Take the Right Actions

It is not the SH&E professional's responsibility to establish an effective safety culture; in fact, in most situations, that would not even be possible. Instead, the SH&E professional must influence site and corporate leaders and line management to establish a safety culture. The practitioner should be knowledgeable and technically competent so s/he can provide relevant guidance, but more importantly, s/he must illustrate the way forward and function effectively as an organizational "leader" (L. Hansen 16+).

In addition, the SH&E professional must:

•Recognize and inform management when safety concerns result from common cause (rather than special cause) and advise on solutions to the causes that exist within the management system (Krause 291). Common cause and special cause derive from the concept of variability. At-risk behaviors that are "a part of the way we do things around here" are common causes that have been observed [and] condoned—and possibly encouraged—by management but may not have resulted in injuries. Special causes include unusual events and activities that are not part of the everyday system. Most injuries are a result of common cause (behaviors that have occurred previously) rather than special cause (Krause 291).

•Continue learning and applying new knowledge. In his three-step prescription for professional success, Lack states, "Get out on the professional edge....At all costs never stop learning! Constantly develop your skills in the art and science of professional management" (827).

•Effectively make the business case for safety and supporting the business function.

**Interpretation/Implications:** SH&E professionals will be accorded greater respect when they act in the capacity of competent advisor and influential leader. Such behaviors have a greater impact on improving overall safety performance than simple management and compliance activities.

#### Conclusion

As Kurt Lewin said 60 years ago, "There is no hope for creating a better world without a deeper scientific insight into the function of leadership, of culture and of the other essentials of group life" (334). Knowledge and application of these key points may serve to bring greater insight to the realm of safety culture and leadership. ■

#### References

Bandura, A.(a). Social Foundations of Thought and Action: A
Social Cognitive Theory. Englewood Cliffs, NJ: Prentice-Hall, 1986.
Bandura, A.(b). Self-Efficacy: The Exercise of Control. New York:
W.H. Freeman & Co., 1997.

Bandura, A.(c). "Self-Efficacy Mechanism in the Human Agency." American Psychologist. 37(1982): 122-147.

Blair, E.H.(a). "Achieving a Total Safety Paradigm Through Authentic Caring and Quality." *Professional Safety*. May 1996: 24-27. Blair, E.H.(b). "Behavior-Based Safety." In *Fundamentals of* 

- occupational Safety & Health, M.A. Friend and J.P. Kohn, eds. 2nd ed. Rockville, MD: Government Institutes, 2000.
- Cooper, M.D.(a). Improving Safety Culture: A Practical Guide. West Sussex, UK: John Wiley & Sons, 1998.
- **Cooper, M.D.(b).** "Safety Culture: A Model for Understanding and Quantifying a Difficult Concept." *Professional Safety.* June 2002: 30-36.
- Cooper, M.D.(c). "Towards a Model of Safety Culture." Safety Science. 36(2000): 111-136.
- Daniels, A. Bringing Out the Best in People: The Astonishing Power of Positive Reinforcement. New York: McGraw Hill Inc., 1994.
- Deming, W.E. Out of the Crisis. Cambridge, MA: Massachusetts Institute of Technology, Center for Advanced Engineering Study, 1986.
- Friend, M.A. and L.R. Pagliari. "Establishing a Safety Culture: Getting Started." Professional Safety. May 2000: 30-32.
- Garner, C.A. and P.O. Horn. How Smart Managers Improve Their Safety and Health Systems: Benchmarking with OSHA VPP
- Criteria. Des Plaines, IL: ASSE, 1999.
- Geller, E.S. The Psychology of Safety Handbook. Boca Raton, FL: CRC Press, 2001.
- Hansen, L.L. "Safety Management: A Call for (R)Evolution." Professional Safety. March 1993: 16-21.
- Hansen, M.D. Out of the Box: Skills for Developing Your Own Career Path. Des Plaines, IL: ASSE, 2002.
- Horsfall, W. "Carly Fiorina: Hewlett-Packard's Fearless Leader." Sam's Club Source. July 2002: 16-17.
- Howe, J. "A Union Perspective on Behavior-Based Safety." In Safety Culture and Effective Safety Management, G. Swartz, ed. Itasca, IL: National Safety Council, 2000.
- Komaki, J.L. Leadership from an Operant Perspective. London: Routledge, 1998.
- Kotter, J.P. Leading Change. Boston: Harvard University Business Press, 1996.
- Krause, T.R. The Behavior-Based Safety Process: Managing Involvement for an Injury-Free Culture. 2nd ed. New York: Van Nostrand Reinhold, 1997.
- Krisco, K.H. Leadership and the Art of Conversation: Conversation as a Management Tool. Rocklin, CA: Prima Publishing, 1997.
- Lack, R.W., ed. Safety, Health and Asset Protection: Management Essentials. 2nd ed. Boca Raton, FL: Lewis Publishers, 2001.
- Lewin, K. "Psychology and the Process of Group Living." *The Journal of Social Psychology*. 17(1943): 113-131.
- Musashi, M. A Book of Five Rings: The Classic Guide to Strategy. Woodstock, NY: Overlook Press, 1974 (1645).
- Petersen, D. Authentic Involvement. Itasca, IL: National Safety Council, 2001.
- Reason, J. Managing the Risks of Organizational Accidents. Aldershot, UK: Ashgate Publishing, 1997.
- Sarkus, D.J. "Servant-Leadership in Safety: Advancing the Cause and Practice." *Professional Safety.* June 1996: 26-32.
- Schein, E.H. Organizational Culture and Leadership. 2nd ed. San Francisco: Jossey-Bass, 1992.
- Settles, M.F. "The Role of a Safety Manager and Safety Leader." In Safety, Health and Asset Protection: Management Essentials, R.W. Lack, ed. 2nd ed. Boca Raton, FL: Lewis Publishers, 2002.

Simon, S.I. and R.A. Carrillo. "Improving Safety Performance Through Cultural Interventions." In Safety, Health & Asset Protection: Management Essentials, R.W. Lack, ed. 2nd ed. Boca Raton, FL: CRC Press, 2002.

Stewart, J.M. Managing for World Class Safety. New York: John Wiley & Sons, 2002. **Your Feedback** Did you find this article interesting and useful? Circle the corresponding number on the reader service card.

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