

Positive Safety Culture

How to create, lead and maintain

By Rosa Antonia Carrillo

THE ABILITIES TO COMMUNICATE WELL and engender trust are often listed as among the most important for leaders. Becoming skilled in these areas is challenging for many reasons, but seldom examined is the obstacle presented by the nature of culture. When a leader does not recognize that culture impacts his/her own and others' perceptions of what is true, the result is unintended messages and consequences that damage the leader's credibility. This has a negative impact on organizational effectiveness. This article focuses on how culture affects safety performance, providing case studies and citing research, in order to motivate both formal and informal leaders to increase their competency in culture management.

Organizational Culture & Leadership

Leaders influence the way others see reality through language and action. That is how they shape and change culture. Many notable management scholars share the notion of leadership's responsibility as defining reality (DePree, 1987; Collins & Porras, 2002; Koestenbaum, 2002; Schein, 2004). Leaders accept the challenge of identifying dysfunctional assumptions and influencing the creation and adoption of new ones that will guide decision making toward organizational success.

According to Schein (2004), who pioneered the concept, organizational culture is the sum of all the shared assumptions that a group has learned throughout its history. It is the residue of success. Assumptions are the way people make sense of reality; they are shared ways of thinking, feeling and perceiving. Schein also says that the ultimate challenge of leadership is the ability to perceive the limitations of one's own culture and initiate the processes to make it more successful.

The visible aspects of culture, elements such as policies, procedures, language, stories and symbols, provide clues about the nature of an organization's culture. However, the most powerful aspects are

invisible. They are the beliefs and assumptions that influence how people think and act. The safety leadership journey begins with the examination of one's own assumptions. Some support safety-conscious behavior and some do not. A leader begins a culture change by correcting his/her own false assumptions first and creating opportunities for others to follow.

Continuing with Schein's model, when embedding new assumptions, the leader first proposes an action to address a problem based on his/her own assumptions of what is right and wrong. Once a group takes action and perceives it to be a success repeatedly, a shared belief develops that it is the right action to take in that situation. Gradually, as more success is experienced, the belief becomes a shared assumption that may become so taken for granted that acting against it may be inconceivable.

Once in place, assumptions are extremely difficult to change. The process is time consuming and anxiety provoking, as one must first admit that long-held beliefs may be wrong. Until the new belief is proven true and accepted, one is thrown into a time of confusion, which may be laced with regret for past mistakes, incompetence with the new skill or behavior required, and uncertainty about the future.

The most central issue for leaders, therefore, is how to get at the deeper levels of culture, how

to assess the functionality of the assumptions made at this level, and how to deal with the anxiety that is unleashed when those levels are challenged (Schein, 2004, p. 36).

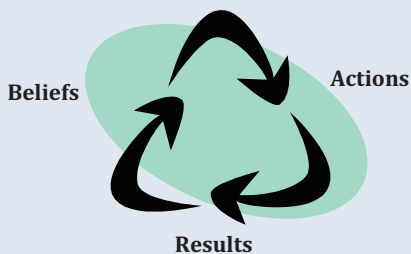
Once the culture is established, people's beliefs determine how they interpret their experience. Asch's (1955) conformity experiments showed that 37% or more of humans

Abstract: *Managing culture is a key leadership competency. This article examines several cultural dynamics and assumptions that affect safety performance and how awareness of them can help SH&E leaders improve their effectiveness in strengthening the safety culture.*

Rosa Antonia Carrillo, M.S.O.D., is president of Carrillo and Associates in Long Beach, CA. Her work focuses on culture change, safety perception surveys, leadership development and helping companies participate in OSHA's Voluntary Protection Programs. Carrillo is a frequent presenter and the author of four books and many articles. She holds an M.S. in Organization Development from Pepperdine University. She is currently a faculty member in the Presidential Key Executive M.B.A. program at Pepperdine University, specializing in organizational behavior.

Figure 1

How Beliefs Form



If an action produces desirable results, a belief develops that it is the way to solve this problem—the way to get what one wants. Figure 1 depicts the cycle of positive results reinforcing beliefs that influence the decision to act.

Creating Positive Safety Cultures

In general, safety culture is thought to influence employees' attitudes and behavior in relation to an organization's ongoing SH&E performance (Choudhry, Fang & Mohamed, 2007). Thus, leaders must understand organizational culture and their role in shaping it. Since safety culture plays a role as both cause and prevention of mishaps, understanding the role culture plays means looking beyond the individual behaviors, the equipment and technical failures to a mindset that says incidents happen because it is normal behavior. In other words, they happen in large measure because of cultural conditioning coupled with predictable but unexpected events.

Using the framework in which leaders facilitate the adoption of successful beliefs, this article points to several areas to investigate. They are typically areas where problems persist despite concerted efforts to fix them. The search for more functional beliefs can be conducted individually or in groups. Culture change, however, which is the adoption of new beliefs and assumptions, occurs in groups. This is what Weick (2001) describes as *sensemaking* and Stacey, Griffin and Shaw (2002) describe as the *mind social process* (which is described in more detail later). It is important to note that the examination of assumptions is an ongoing process since new information is continually revealed.

Given the difficulty of working with beliefs and assumptions, many ask, "Isn't it better to start with changing behavior since it is visible?" In urgent situations, enforced compliance to change behavior may be justified. Also behavior-based safety observations appear to change behavior. However, one must remember that long-lasting change requires changes in the theories of action that people use and in an organization's learning systems (Argyris, 1999). Ultimately, the belief system must shift for the desired behavior to be self-motivated.

To work at this level, one can think about beliefs as the explanations people develop of how the world works, what people need to do to get the results they want. Behavioral scientists debate which comes first, the behavior or the belief. Some think beliefs come first, that people form or are taught theories about the world and refer to those theories in order to act. Because people operate in groups, these beliefs are

selected a wrong answer to conform to those around them regardless of visual proof to the contrary. Berns, Chappelow, Zink, et al. (2006), confirmed this research. "We like to think that seeing is believing, but the study's findings show that seeing is believing what the group tells you to believe." This information reveals that the power of culture is amoral. It can support both healthy and unhealthy behaviors.

formed in concert with others, persuading and justifying perceptions to shape what people believe and act jointly in that context. When people get desirable results, it reinforces their beliefs (Stacey, et al., 2002).

Others might say people act and that their beliefs are formed based on the results of their actions (Weick, 2001). If an action produces desirable results, a belief develops that it is the way to solve this problem—the way to get what one wants. Figure 1 depicts the cycle of positive results reinforcing beliefs that influence the decision to act.

This cycle poses a dilemma because the belief may or may not be correct. When it is correct, the effect is to make life easier because one can act automatically without making a decision and get good results (Bargh & Chartrand, 1999). However, one can experience good results that lead to the wrong belief. Witness some common unsafe behaviors such as speeding, smoking or refusing to wear Nomex clothing because it is too hot. In the moment, the result feels good, but the person is unaware of the larger truth that at any moment events can shift and cause the person great harm.

A fundamental question for leaders is, do we work on changing the belief directly or do we force the behavior change and let the belief develop as a result of repeated experience with the new behavior? As noted, forcing a behavior change to ensure immediate compliance may be the correct path under certain circumstances. Moving from enforced compliance to self-directed behavior, however, requires that individuals believe the new behaviors are the best way to solve a problem to get the work done.

Weick (2001), who has studied major disasters, says, "The basic idea of sensemaking is that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs" (p. 106). A culture change effort is literally asking people to recreate a part of their reality.

Thus, facilitating sensemaking can be a powerful leadership tool when done in groups. The leader may use an incident or equipment failure as the subject to lead a dialogue to arrive at the beliefs that will guide correct decision making and action in the future. It is key to engage people in the analysis and problem solving.

As Weick (2001) further proposes, "People learn about events when they compare what they see with what someone else sees and then negotiate some mutually acceptable version of what really happened" (p. 447). If the leader does not actively facilitate the discussion and share relevant data, the

The safety leadership journey begins with the examination of one's own assumptions. Some support safety-conscious behavior and some do not. A leader begins a culture change by correcting his/her own false assumptions first and creating opportunities for others to follow.



discussion might happen informally and consensus will form without input from management. This could result in faulty problem solving since people typically interpret external events within the existing culture and language system that created the problem (Daft & Weick, 1984).

Senge (1994) describes the introduction and acceptance of new assumptions about the way work is done via dialogue. In a dialogue, there is no blame fixing, only open conversation to explore why people chose to work in what is or appears to be an unsafe way. One may discover that people had logical reasons for their actions, while other times they had faulty reasoning (operating under false assumptions). Support for change increases when the discussion is treated as an educational shift rather than as an attitude adjustment.

In summary, culture change efforts seek to replace nonfunctional (false) assumptions with successful ones. New, long-lasting behaviors come from changing the way one thinks. By definition, the leader identifies the faulty assumptions and presents new ones that demonstrate successful results.

The Impact of Culture on Communication: That Wasn't What I Meant!

Leaders get frustrated when they take actions to communicate the importance of safety and later learn that people got the message that management puts production over safety. How does this happen? In the author's experience, the most likely cause is polarity. It is embedded in the culture and it presents a great obstacle to management's ability to communicate commitment to safety.

According to Koestenbaum (2002), polarities are

states that appear to be contradictory but are both right. In fact, they are interdependent. The human mind feels compelled to choose between apparent opposites such as society and the individual, or liberty and equality in order to eliminate ambiguity. An example in safety would be choosing between production (efficiency) and safety (process).

Collins and Porras (2002) refer to polarities as paradox, describing them as the "tyranny of the *or*." Business polarities they feel hold back performance include the beliefs that one can only have "change *or* stability, low cost *or* high quality, planning *or* opportunism." Collins and Porras suggest replacing the *or* with *both/and*, but it is much more difficult in practice than it sounds.

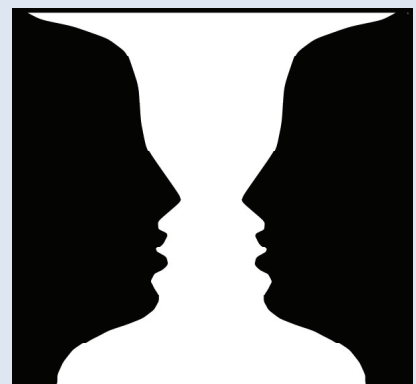
Polarity presents a huge area of opportunity to improve the safety culture and one's ability to communicate commitment to safety. People eliminate ambiguity by only focusing on one aspect of a polarity at a time. So, when a leader talks about production, and does not specifically mention safety, the listener will likely assume that safety is not important to the leader. When confronted by polarity, it is difficult to hold two points of view at once, so people freeze on one point of view or jump back and forth.

Figure 2 is a metaphor for polarity because one figure could not exist without the

When confronted by polarity, it is difficult to hold two points of view at once, so people freeze on one point of view or jump back and forth.

Figure 2

Rubin's Vase



other. According to scientists, the mind is not able to visualize both the vase and the faces at once because the mind interprets each figure according to which is declared the background. In the realm of language, practice and awareness increase the mind's ability to see the whole picture, resulting in improved communication of management's commitment to both safety and production.

Two examples follow. The first demonstrates one manager's inability to deal with polarity in his communications. The second case took place at a power generation plant; it demonstrates how leaders can help employees cope with polarity.

According to the *Los Angeles Times*, in 1997 Disneyland moved to what is known as "reliability-centered maintenance" to reduce costs. Then, for the first time in the park's history two fatalities and 10 injuries occurred because of equipment failure between 1998 and 2003. Workers interviewed said that the move "gutted worker morale and employees' sense of ownership of the rides." One supervisor who worked at Disney from opening day to 1997 when he retired said, "I have a lot of loyalty to Disneyland, but I feel that somebody's got to say something about how they're operating out there. When Disneyland opened, safety was the No. 1 thing. Now they say that today, too. But I think over time, profit became more important." Why did they think this? They quoted Paul Pressler, park president, as saying, "We have to ride these rides to failure to save money" (Anton & Yoshino, 2003).

It appears that Pressler did not consider polarity and culture when he crafted his announcement about the new maintenance system. Thus, he did not introduce the system in a way that aligned with safety beliefs and people interpreted the change as "management no longer cares about safety." Also, it could be inferred that even if the new assumptions about the safety of the new maintenance system were clearly stated, care must be taken not to use language such as "we have to ride these rides to failure to save money," which is likely to trigger negative emotions. Disney's response to the article, as can be expected, was that safety is the number one priority. The challenge is being able to sustain credibility for that value while introducing cost-saving measures.

In contrast, the next case demonstrates how miscommunication can be averted by immediately addressing misperceptions.

In a meeting with operators, the plant manager introduced a new policy, "Safety is our first priority." The policy was made in reaction to an incident where putting production over safety was named as a root cause. While introducing the policy the plant manager also went over some operational procedures.

At the conclusion, the facilitator asked the group what practices they thought would most raise their awareness. They listed more

thorough communication at shift exchanges, reading and initialing the logbook, and better rounds. Then, the two supervisors said, "I thought this was supposed to be about safety. We're only focusing on production!" The plant manager was shocked to hear that the supervisors had not connected safety with better communication and better rounds. To him, safety was integrated into the operational procedures; it wasn't to the supervisors.

A dialogue ensued and a tailboard was integrated into the shift exchange to bring attention to safety. The language and structural change helped the operators integrate safety and production. An interesting aspect of this exchange was that while the plant manager was shocked and frustrated, it was the operations manager who understood the dilemma and suggested the tailboard to meet the supervisors' expectations of attention to safety.

Collins and Porras (2002) quote F. Scott Fitzgerald who said, "The test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time and still retain the ability to function." Their point is that visionary leaders can hold these polarities and communicate them in a way that helps people see that efficiency and caring are interdependent rather than contradictory.

Leadership Response to Incidents Shapes Culture

In a multicultural environment, culture takes on added dimensions. National cultures differ on many polarities (called cultural dimensions) such as individualism versus collectivism, high power distance versus low power distance (hierarchical vs. flat power structures), and uncertainty avoidance (Hofstede & Hofstede, 2005; Trompenaars & Hampden-Turner, 1997). These contribute to misunderstanding and conflict.

These dimensions are not absolute. For example, an individualistic culture has collectivist elements. Thus, people's beliefs in one's organization may be on a continuum between the two poles. The communication challenge increases when one adds a multicultural environment with employees from many countries.

In the author's 19 years' experience with multiple industries, one dimension, universalism versus particularism (Trompenaars & Hampden-Turner, 1997), is a cultural polarity that shows up in conflict about the most effective way to communicate and learn from incidents. Universalism places the emphasis on obeying rules. It represents the belief that certain rules and truths can be identified, then should be applied equally to everyone. Particularism places greater emphasis on relationships and rule application is situational.

The U.S. has one of the strongest universalism societies, which contributes to the tendency to rely on logic, rules and procedures as the right way to handle difficult situations. However, focus groups with more than 3,000 employees over a 10-year period consis-

tently show that employees hold “my manager cares about us as people” as a key indicator of management’s commitment to safety (Carrillo, 2008). It is the author’s observation that when managers focus on the preferred universalism assumptions and neglect the importance of relationships (particularism), communication fails. As the following case illustrates, this is especially true in the aftermath of an incident.

A lab technician at a pharmaceutical company seriously burned himself in a lab due to following improper procedure handling a flammable agent spill. The director gathered everyone and gave a report on the root causes of the accident. He reminded everyone of the proper procedure for handling chemical spills and ended by saying that a lot of work time had been lost so everyone should refocus on their jobs.

By the following week everyone on the safety committee had resigned because they said the director did not care about people. The safety committee chair, a chemist, said, “Everyone in the facility was talking about how all he cared about was getting the work done.” In actuality the director, a very ethical person, had spent a great deal of time with the injured technician and his family. It did not occur to him to talk about his personal concern in his communication to the staff.

In this case, the director was not coachable. He did not want to let go of his belief that “everyone should know I care, they’re intelligent.” He was technically competent, but did not have the inclination to adopt another version of reality and improve his communication skills.

People have an automatic filter that interprets what a speaker is saying according to their own experience (Argyris, 1999). This presents an enormous barrier to communication, particularly when polarities are present. A leader responsible for creating or maintaining safety must understand the nature of these filters and use language carefully. One’s words and actions are like the scalpel in the heart surgeon’s hand. Successful communication depends on the exact use of words and being conscious of one’s actions. When a mistake occurs, one must recognize it so the message can be restated and one’s actions clarified. In this way, the trust level needed to influence the culture may be maintained.

Consider this manager’s handling of near-miss reporting:

There is research indicating that open reporting of near misses results in an organization’s ability to correct hazards and unsafe behaviors before injury or damage occurs, thus resulting in fewer accidents (Jones, Kirchsteiger & Bjerke 1999; Van der Schaaf, Lucase & Hale, 1991). After hearing the evidence, a manufacturing plant manager agreed to implement a near-miss reporting program and assured participants that no action would be taken to punish individuals who reported them. A short

training session introduced the program and the increased safety benefits of participating.

The program gained momentum until one person who reported a failure to lockout as a near miss received a reprimand in his file. The plant manager’s belief was that the breach of procedure was too serious to be let go without disciplinary action. Participation in near-miss reporting all but stopped, the accident rate was up, and at union negotiations that year relationships were strained and confrontational between union and management.

An outsider came in to improve communication between the two parties, and the near-miss reporting incident quickly arose as a critical incident that triggered the breakdown of management-union relations. Union members believed management had broken its commitment and had used the near-miss program to entrap one of its members. No amount of explanation on the plant manager’s part regarding his reasoning helped. It was not until the plant manager shifted his assumptions that the logjam was broken. The plant manager did so by first apologizing to the union members.

As he explained it, he realized he had not trusted (believed) that by removing the fear of near-miss reporting he was supporting safety rather than jeopardizing it. His belief that withholding punishment would communicate condoning an unsafe action dominated his thinking. He had broken his commitment to not seek disciplinary action, and had failed to trust people to learn from their mistakes.

He removed the letter from the employee’s file and asked everyone to renew participation. The plant manager’s willingness to admit a mistake restored a tentative trust line. Compliance to lockout improved, the near misses began to flow in and, over time, as measured via safety culture surveys, positive perceptions grew regarding the belief that “here we take the opportunity to learn from our mistakes” and “management cares about us as people.”

In these two cases, the managers had a negative impact on safety and lost the trust of their employees. In the lab fire, the manager was unable to correct his error. The second manager corrected his by apologizing and embedding new beliefs in the culture (we learn from our mistakes and management cares about us) that grew over time. These examples show that incidents offer opportunities for cultural transformation when trust levels are maintained and a manager communicates in a way that reinforces people’s belief that s/he is committed to both safety and production.

People have an automatic filter that interprets what a speaker is saying according to their own experience. A leader responsible for creating or maintaining safety must understand the nature of these filters and use language carefully.

Managing, shaping and creating culture is a leadership competency. Any attempt to work at the cultural level requires patience and willingness to make corrections and apologies along the way. The latter helps maintain the trust level a leader needs to be effective.

A Brief Review of Trust

Trust is mentioned often throughout these case studies because, in the author's experience, lack of trust constantly emerges as an issue in safety improvement efforts. Briefly, what is trust? Experts link trust with the willingness of the individual to take risks based on his/her relationship with an individual or organization. Three factors have emerged in the research on trust as the core characteristics of an individual that can be trusted: ability, benevolence and integrity (Schoorman, Mayer & Davis, 2007).

Ability means technical competence, benevolence is the belief that the trusted person will act on others' behalf, and integrity is acting on a set of principles that the trustee finds acceptable. If a leader is viewed as having ability and integrity, but not benevolence, there is no trust. This does not mean competence and integrity are not important; it means they are not enough (Schoorman, et al., 2007). The perceiver must believe that the leader will act in his/her best interest, that the leader cares about the person as an individual.

To create a positive safety culture, a leader must address the trust level within the organization and the degree to which s/he is trusted personally. Trust is like money in the bank, without it one cannot get a loan. Loans are what one needs when trying to change a culture. Think about the kinds of changes needed. Is the shift toward assuming more personal responsibility? Is it to confront another's unsafe action? Stop an unsafe job? All of these take risk. Research offers the insight that risk is more likely to be taken if people trust the person asking them to take it.

Communication Across Subcultures

Occupational groups (engineering, maintenance, sales) as well as the larger groups created by the division between management and labor form subcultures within the larger organizational culture. Each are needed for the company to function, yet many of them conflict, causing the company to be less effective than it could be (Schein, 1996). Several examples reflect subculture divisions that affect safety performance.

When Vaughan (1996) coined "normalized deviance" in her analysis of the *Challenger* disaster, she concluded that NASA management had created a closed culture in which decisions obviously questionable to the outside world were seen by NASA's management as prudent and reasonable.

It can truly be said the *Challenger* launch decision was a rule-based decision. However, the cultural understandings, rules, procedures and norms that always had worked in the past did not work this time. It was not amorally calculating managers violating rules that were responsible for the tragedy. It was conformity (p. 386).

Leveson, Cutcher-Gershenfeld, Barrett, et al. (2004), report that Jim Kennedy, one-time director of the Kennedy Space Center, said in an interview that "the most important cultural issue the shuttle program faces is establishing a feeling of openness and honesty with all employees where everybody's voice is valued." The Kraft (1995) report on the space shuttle program notes that concerns about shuttle safety were dismissed by managers who labeled those who brought up concerns as being partners in an unneeded "safety shield" conspiracy. The assumptions held by some engineers were completely different than those held by the managers making the decisions to proceed.

This tragedy illustrates the necessity for leaders to understand cultural dynamics and how to breakdown the natural barriers they present to communication. It may not be enough to express support for openness and trust. Even if members of one subculture listen to and examine disconfirming information, they may not see the fallacy of their own assumptions. As noted by Asch (1955) and Berns, et al. (2005), it is the very nature of group dynamics to block out disconfirming evidence. This is an unconscious process, so it takes skilled inquiry to uncover the assumptions and beliefs that keep members of different subcultures from seeing the truth in each other's point of view.

SH&E professionals can play a key role in bridging the gap between subcultures. First, however, they must recognize their own assumptions. Some evidence points to a significant divergence in assumptions between SH&E professionals and managers. For example, in a 2005 worldwide survey, 24 SH&E professionals and 21 executives responded to a request to prioritize a manager's role in achieving the primary goals of an SH&E program (that had been previously selected on the survey). Seventy-four percent of the managers listed "hold regular SH&E communication events with staff and associates" as their top priority, while 70% of the SH&E professionals had it as the sixth priority for managers. SH&E professionals felt management's first priority should be taking SH&E into account when making business decisions (Carrillo, 2005).

Such differences in expectations are significant because they reflect a fundamental disagreement on how to solve a common problem: how to improve SH&E performance. When a group fails to meet the expectations of another, credibility and respect, both key ingredients for collaboration, may break down. Special effort is required to bring these two groups together to understand each other's expectations and views. Otherwise, members of one group could make negative assumptions about the other group's commitment or competency based on a difference of priorities, which are based on beliefs.

Assumptions About Corrective Actions

In 1941, Heinrich set the focus of accident prevention on human error: "Among the direct and proximate accident causes for industrial accidents,

88% are unsafe acts of persons, 10% are unsafe mechanical or physical conditions and 2% of accidents are unpreventable" (p. 20). Over time, professionals pointed to error in blaming individuals and introduced systems thinking which focused on improving culture and organizational systems to prevent accidents (Carrillo & Simon, 1995; Vaughan, 1996; Whittingham, 2004).

More recently, organizational effectiveness research has turned to the natural sciences and questioned the assumptions management holds about cause and effect and organizational control. Since a great deal has been written about systems thinking, this discussion focuses on the implications of what is called the "new science" (Wheatley, 2006).

Snook (2000) analyzes the downing of two Army Black Hawk helicopters over northern Iraq in 1994, which caused 26 deaths. He references Secretary of Defense William Perry's findings, which focused on technical failure and human error, and resulted in increased procedures, policies and training to prevent the same problems from recurring. Snook takes an organizational psychology approach to offer a theory about why the participants failed to follow procedure without blaming individuals.

Snook's (2000) "practical drift" theory offers an insightful answer and provides direction for actions that could address the unpredictable nature of organizational behavior which produces such disasters. He defines practical drift as "the slow uncoupling of practice from procedure" (p. 24), a mechanism that operates across time and levels to explain how the actions of individuals, groups and organizational elements can combine into a disaster. He concludes that the typical response of tightening procedures and increasing penalties for failure to comply would inevitably lead to the same pathology because in time, the new procedures would also be ignored.

According to this model, practical drift occurs when procedures are designed for tightly coupled systems, but day-to-day experience shows them to be loosely coupled. Coupling is the level of interdependence between subunits. When elements are tightly coupled, whatever happens to one system directly affects the other. When the system is loosely coupled, no consequences are experienced for neglecting to follow standard procedure. Thus, over

Tips for Leading High-Performance Cultures

- Create opportunities for dialogue and conversation to create buy-in for safe behaviors, and avoid reliance on rules and policies.
- Use relationship building to strengthen commitment and buy-in rather than rules and logic. Respect and keeping commitments is key.
- Accept that mistakes are necessary for learning because people learn through action. Apologize and move on when necessary.
- Invent a process that acknowledges that people will drift from the procedure and manage the effects. Leaders want people to contribute their creativity to solve problems, and they want to avoid disasters.
- Communicate that you care. It opens the door to collaboration and acceptance of new ideas. Blame, guilt and punishments increase resistance.
- Consider how culture will impact the interpretation of messages. Prepare thoughts and words carefully before delivering them at meetings and presentations.
- Recognize that change generates anxiety. Plan how to manage your own and support others in managing theirs.
- Notice how others feel around you and how your words are interpreted. Get feedback and respond. Do not take it personally.
- Notice that departments, professions and roles create subcultures. Do not assume they share common meaning. Help bridge the gap and translate.
- Learn to view polarity and paradox as a necessity to the success of the organization, stop trying to resolve or eliminate ambiguity.
- Delve into the beliefs and assumptions people are using to tackle problems. A leader helps people discover what could work, does work or does not work by asking questions or providing insight. Mere behavior change is not enough. Extraordinary improvements come from shifts in beliefs about the way things work.

time each subunit develops its own procedures that seem more logical. This is due to what Snook (2000) calls "logics of action" [and Schein (1996) calls cultural dynamics]. When the system suddenly becomes tightly coupled, the informal procedures developed by the subunits no longer apply and lead to disaster.

Snook (2000) suggests that the typical command-and-control response of increased policies and procedures does not address the core issues that if addressed would prevent future incidents. Instead, he urges professionals and managers to realize that the important question is not how to fix pilot error, crew inaction or even practical drift. The more fundamental question is, what can be done given this reality of human behavior? How can practical drift be addressed if not with increased and tighter rules?

A beginning would be to accept that drift will occur and more rules are not the answer. Snook (2000) also emphasizes the dynamics of sensemaking to both explain how people come to believe that not following the procedure makes more sense, and engage people in an inquiry that could lead to a more profound sense of awareness which might prevent future tragedies more effectively than increasing rules and procedures.

Conclusion

A leader must be able and willing to look within to recognize and dispel the false beliefs that keep one from seeing the truth. While doing so, s/he must remember that the truth is revealed in layers so that what seems to be true today can change when new evidence is revealed. People learn from action. Mistakes happen. Letting go of self-blame and blaming others frees leaders to learn from the mistakes and continue to take the actions necessary to direct an organization with courage and compassion.

Managing, shaping and creating culture is a leadership competency. Some principles and skills to fulfill that competency are described in the cases presented. They demonstrate that culture is complex. Any attempt to work at the cultural level requires patience and willingness to make corrections and apologies along the way. The latter helps maintain the trust level a leader needs to be effective.

It is the nature of culture to be stable and not easily changed. Groups want to hold on to their cultural assumptions because culture provides meaning and makes life predictable. Any sweeping change creates ambiguity, which people do not like and try to avoid. Using existing assumptions to create change reduces resistance. It would be difficult to employ an empowerment approach in a hierarchical, command-and-control culture. These implications take on greater dimension in multicultural environments.

The findings of major incident investigations point to the fallacy of believing that rewriting, fixing and increasing rules and procedures is enough to prevent similar incidents. Clarifying and posting policies is helpful to those who write and discuss them. But by themselves, they represent a limited form of communication and they are not the tools that will transform culture. That is much more likely to happen in the process of sensemaking, having discussions of divergent viewpoints with people one trusts. These conversations create a common understanding and the opening for a new belief. A belief is only accepted, however, once it is tested and proven successful.

Finally, much has been written about identifying and letting go of dysfunctional beliefs as part of the process needed to maintain and create a positive safety culture. Organizations have strong positive assumptions that support this work as well. These may include assumptions such as "everyone deserves a safe and healthy workplace," "everyone should go home intact," and "no matter our differences we can agree that safety is important." The differences appear to be in how these assumptions are acted on. With the information that culture change produces anxiety, perhaps it would be wise to point to these assumptions and say that people are not being asked to change so much as they are being asked to align with others on their expectations for the best way to act from these positive assumptions. ■

References

- Adams, J. (1995). *Risk*. London: Routledge.
Anton, M. & Yoshino, K. (2003, Nov. 9). Disneyland's ride upkeep criticized by park workers. *Los Angeles Times*.

- Argyris, C. (1999). *On organizational learning*. Oxford, U.K.: Wiley-Blackwell.
Asch, S.E. (1955). Opinions and social pressure. *Scientific American*, 193(5), 31-35.
Berns, G., Chappelow, J., Zink, C.F., et al. (2005). Neurobiological correlates of social conformity and independence during mental rotation. *Biological Psychiatry*, 58(3), 245-253.
Bargh, J.A. & Chartrand, T.L. (1999). The unbearable automaticity of being. *American Psychologist*, 54, 462-479.
Carrillo, R.A. (2005). Management commitment and employee involvement as factors in safety performance. Presentation of research to Worldwide Johnson and Johnson Co.
Carrillo, R.A. (1996, Oct.). The trust factor in safety performance. *Professional Safety*, 41(10), 28-33.
Carrillo, R.A. (2005). Role of managers in EHS [Internal survey and report]. Long Beach, CA: Carrillo & Associates.
Carrillo, R.A. (2008). Safety culture focus groups factor analysis [In-house report]. Long Beach, CA: Carrillo & Associates.
Carrillo, R.A. & Simon, S. (1995). Innovative applications of organization development technologies for improving safety performance. *Proceedings from the ASSE Safety Technology 2000 Symposium, Orlando, FL, USA*.
Choudhry, R.M., Fang, D. & Mohamed, S. (2007). The nature of safety culture: A survey of the state of the art. *Safety Science*, 45(10), 993-1012.
Collins, J.C. & Porras, J.J. (2002). *Built to last*. New York: HarperCollins.
Daft, R.L. & Weick, K.E. (1984). Towards a model of organizations as interpretation systems. *The Academy of Management Review*, 9(2), 284-295.
DePree, M. (1987). *Leadership is an art*. New York: Doubleday.
Heinrich, H. (1941). *Industrial accident prevention: A scientific approach*. New York: McGraw-Hill.
Hofstede, G. & Hofstede, G.J. (2005). *Cultures and organizations*. New York: McGraw-Hill.
Jones, S., Kirchsteiger, C. & Bjerke, W. (1999). The importance of near-miss reporting to further improve safety performance. *Journal of Loss Prevention in the Process Industries*, 12, 59-67.
Koestenbaum, P. (2002). *Leadership: The inner side of greatness*. San Francisco: Jossey-Bass.
Kraft, C. (1995). Report of the space shuttle management independent review team. Retrieved March 23, 2010, from <http://www.fas.org/spp/kraft.htm>.
Leveson, N., Cutcher-Gershenfeld, J., Barrett, B., et al. (2004). Effectively addressing NASA's organizational and safety culture: Insights from systems safety and engineering systems. *Proceedings of the Engineering Systems Division Symposium, MIT, Cambridge, MA, USA*.
Schein, E. (1996). Three cultures of management: The key to organizational learning. *Sloan Management Review*, 38(1), 9-20.
Schein, E. (2004). *Organizational culture and leadership*. San Francisco: Jossey-Bass.
Schoorman, F.D., Mayer, R.C. & Davis, J.H. (2007). An integrative model of organizational trust: Past, present and future. *Academy of Management Review*, 32, 344-354.
Senge, P. (1994). *The fifth discipline*. New York: Doubleday.
Smith, A., Plowman, D.A., Duchon, D., et al. (2009). A qualitative study of high-reputation plant managers: Political skills and successful outcomes. *Journal of Operations Management*, 27(6), 428-443.
Snook, S.A. (2000). *Friendly fire*. Princeton, NJ: Princeton University Press.
Stacey, R.D., Griffin, D. & Shaw, P. (2002). *Complexity and management: Fad or radical challenge to systems thinking?* New York: Routledge.
Trompenaars, F. & Hampden-Turner, C. (1997). *Riding the waves of culture*. New York: McGraw-Hill.
Van der Schaaf, T.W., Lucase, D.A. & Hale, A.R. (Eds.). (1991). *Near-miss reporting as a safety tool*. Oxford: Butterworth-Heinemann.
Vaughan, D. (1996). *The Challenger launch decision*. Chicago: University of Chicago Press.
Weick, K.E. (2001). *Making sense of the organization*. Malden, MA: Blackwell.
Wheatley, M.J. (2006). *Leadership and the new science: Discovering order in a chaotic world*. San Francisco: Berrett-Koehler.
Whittingham, R.B. (2004). *The blame machine: Why human error causes accidents*. Boston: Elsevier.