Organizational Culture and Safety:

Creating a Workplace with Safety as a Core Value

Introduction

In the U.S., companies are required to provide a safe workplace for workers and workers are required to follow the safe work practices of the company ("The Williams-Steiger Occupational Safety and Health Act of 1970," 1970). Yet, according to www.OSHA.gov 5900 fatalities occurred in the workplace in 2001, not including the workplace deaths associated with the September 11, 2001 bombing of the World Trade Centers. Traditional approaches to occupational safety include job design, equipment engineering, safe work practice development and protective equipment provision. Evidence shows the cause of most workplace accidents is not unsafe physical or mechanical conditions, but human error (Reber & Wallin, 1994). The culture of an organization has a significant impact on how management and employees interact to produce a safe workplace (Gherardi & Nicolini, 2000).

Safety culture first appeared in the literature in 1987 as a result of the Chernobyl nuclear disaster. A poor safety culture was determined to be a factor in both the Challenger and Columbia space shuttle accidents (CAIB, 2003). The term safety culture is used to describe the environment in which safety is thought to exist within the organization as a high priority (Cooper, 2002). Safety culture is a very complex issue and as yet not well defined (Flin & Mearns, 1999). Attesting to this complexity, Harvey et al (2002) found that even within one organization several cultures may coexist. Types and frequency of safety communications, management involvement, and levels of personal responsibility for safety all have an impact on the safety culture. This article examines the role the organizational culture has in workplace safety and discusses safety as a core value in the organizational context.

Organizational culture

Much has been written about organizational culture over the past thirty years, with many different theories and opinions about what culture is and is not and how it affects organizations.
A few of the theories are considered here to lay a sufficient foundation for evaluating the concept of safety culture and how it relates to organizational culture overall.

A definition of organizational culture

Schein defines organizational culture as "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 1992). Schein (1992) provides a descriptive illustration of culture in terms of multiple layers. The outermost visible layer is artifacts and symbols, next is the layer of patterns of behavior, then behavioral norms, values, and fundamental assumptions at the deepest core of the culture.

The affect of culture in organizations

The most visible aspects of the organization are often where the most attention is given. Thornbury (2003), drawing from studies of Schein's works, depicts the observable components of the culture as status symbols, power structures, routines, office layout, language, stories, heroes and villains, systems and processes, and reward and recognition systems. Yet, the core assumptions, values, and beliefs within an organization potentially can cause an organization to have great resiliency, resulting in failed attempts to change the culture (J. P. Kotter, 1996). To understand culture more thoroughly, it is best considered from different viewpoints.

Denison (1990) portrays the impacts of culture in organizations through four views or hypotheses. The consistency hypothesis is the idea that common perspectives and beliefs will promote stability and control within the organization. A strong sense of internal identification will be prevalent among the organization's members. The mission hypothesis is the concept that shared purposes, direction, and strategy will unite and coordinate members on common goals. The involvement/participation hypothesis is the notion that through involvement and participation, members will have a sense of responsibility and ownership, leading to organizational commitment and loyalty. The adaptability hypothesis is the supposition that an organization will adapt to the
external environment through internal organizational changes that will promote survivability, growth, and development. Denison’s propositions demonstrate how the culture of an organization relates to internal and external forces. The consistency and involvement/participation hypotheses are largely focused internally, where the mission and adaptability hypotheses are direct responses to the environment. The difference is that the consistency and mission hypotheses drive the culture toward stability and control. The involvement/participation and adaptability premises are more focused on change and flexibility. These views on organizational culture serve to illustrate the function of culture in organizations. Because culture is complex (J. Kotter & Heskett, 1992; McMurray, 2003; Qualitative Cultures of Inquiry, 2003; Thornbury, 2003), it is possible that many of the concepts mentioned simultaneously exist in an organization (Middleton, 2002).

Figure 1: Denison’s four organization culture views

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
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<tr>
<td>Stability/Control</td>
<td>Change/Flexibility</td>
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<tr>
<td>Consistency</td>
<td>Participation/Interaction</td>
</tr>
<tr>
<td>Mission</td>
<td>Adaptability</td>
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Many different kinds of culture subsets can be found in an organization (Middleton, 2002). Communities of practice are culture groups that form within an organization because of a common set of needs, either social or professional. These clusters of people are sometimes sanctioned by the organization and are often informal without any specific place in the organizational hierarchy. These groups can either be a positive or negative force in the...
organization. At times subcultures can arise because of issues in the organization that are not addressed; employees may group together informally to attempt to deal with the issues themselves. Positive subcultures exist either formal or informally. Examples include groups of employees who have a common work or social interest such as community involvement, professional development, or sports. The safety culture within an organization may be considered a subculture in some aspects, but also may be a significant aspect of the overall culture.

Safety culture

The concept of a safety culture emerged and was first introduced by the Advisory Committee for Safety in Nuclear Installations (ASCSNI) after the Chernobyl nuclear disaster (Harvey et al., 2002). The Columbia Accident Investigation Board (CAIB) found that a poor safety culture was a significant factor in the tragic Challenger and Columbia accidents (CAIB, 2003). These very public accidents led to the deaths of workers and, in the case of Chernobyl, also public by-standers. When a safety culture is poor, the leadership of the organization is often found to be complacent or disinterested in safety of workers and the public. Safety is not a core value. In a positive safety culture, just the opposite is true.

No single definition of what constitutes a safety culture exists; however, the literature suggests that it includes the norms, rules, and behaviors that are present with respect to safety (Flin & Mearns, 1999) as well as the character of the organization, the beliefs, and values, that are exhibited (Eckenfelder, 2000). Table 1 is a compilation of safety culture definitions from the literature. An evaluation of the definitions shows common elements of attitudes, beliefs, values, and norms about safety, all elements of organization culture. This demonstrates that there are safety cultures within organizations, however there is no suggestion that safety is integrated within the overall culture or if it is a subculture within an organization.
Table 1: Definitions of safety culture

<table>
<thead>
<tr>
<th>Safety Culture Definition</th>
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<tr>
<td>&quot;That observable degree of effort by which all organizational members direct their attention and actions toward improving safety on a daily basis.&quot;</td>
<td>M.D. Cooper, 1993</td>
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<td>&quot;That assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance.&quot;</td>
<td>International Atomic Energy Authority, 1991 (in Harvey, 2002, p. 19)</td>
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<td>&quot;Safety culture is viewed as involving perceptions and attitudes as well as the behavior of individuals within an organization.&quot;</td>
<td>Harvey et al, 2002</td>
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<td>&quot;The set of beliefs, norms, attitudes, roles, and social and technical practices that are concerned with minimizing the exposure of employees, managers, customers and members of the public to conditions considered dangerous or injurious.&quot;</td>
<td>Turner et al (in Cooper p. 31)</td>
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<td>&quot;The ideas and beliefs that all members of the organization share about risk, accidents and ill health&quot;</td>
<td>The Confederation of British Industry in Cooper, 2002</td>
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<td>&quot;The product of individual and group values, attitudes, competencies and patterns of behavior that determine the commitment to and the style and proficiency of an organization’s safety and health programs. Organizations with a positive safety culture are characterized by communications founded on mutual trust, shared perceptions of the importance of safety and confidence in the efficacy of preventive measures.&quot;</td>
<td>U.K. Health and Safety Commission in Cooper (Cooper, 2002)</td>
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<td>&quot;An environmental setting where everyone feels responsible for safety and pursues it on a daily basis, going beyond 'the call of duty' to identify unsafe conditions and behaviors, and intervene to correct them... people 'actively care' on a continuous basis for safety... (which) is not a priority that can be shifted depending on situational demands, rather safety is a value linked with all other situational priorities&quot;</td>
<td>(E Scott Geller, 2001)</td>
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**Manifestation of safety culture**

Safety culture can exist as an integral part of the overall organizational culture, as it does in companies such as Dupont and Alcoa, or it can exist as part of a subculture. The distinguishing factor may be the context of the organization and the degree to which safety is determined to be a salient factor.

Harvey et al (2002) assert that multiple cultures of safety can exist within a single organization. They base their argument in studies that show that from 2 to 9 organizational factors are relevant to safety, including job satisfaction, individual responsibility, management responsibility, leadership style and communications, commitment, risk awareness, and risk taking. However, their argument tends to address the degree to which various subcultures within an organization place attention on safety, not whether a safety culture exists independent of an overarching organizational culture. It is likely that certain organizations, because of the high exposure of risk for their employees, have an emphasis on safety within the overall organizational culture. Yet, even when safety is part of the overall organizational culture, different subcultures of safety can exist.

Harvey et al (2002) examined subcultures within a highly regulated environment in terms of social construction of risk theory. Two constructs of particular interest are hierarchical and fatalist subcultures. A study was conducted in which shop floor employees and managers were studied to determine if they operated within a common safety culture. The shop floor employees exhibited two different subcultures. The hierarchical subculture was focused on compliance and action through downward instructions whereas the fatalist subculture accepted the world as unpredictable and made choices about whether to avoid hazards or not. Interestingly, the researchers confirmed the existence of a management subculture separate and apart from the employees’ subcultures. The findings that multiple subcultures exist within one organization are generalizable to other regulated industries such as the electric utility industry.

This author has over 27 years of experience in the electric utility industry, a regulated industry that inherently addresses safety because of the high exposure of its workers to a wide variety of hazards. Experience shows that various organizations or departments within various
utilities have different emphases on safety related to the level of hazardous exposure related to the functions of the department. For example, the accounting department will likely not have the same level of concern for safety as a distribution operations department. However, observations indicate that some electric utilities have a higher degree of safety embedded in their overall culture than others. One company the author worked for was led by an executive who talked about safety during every event, expected routine safety audits by all departments, modeled safe behavior, and personally reinforced positive safety behaviors. When the leadership changed, the emphasis on safety changed at the executive level. Greater disparity of emphasis for safety emerged within the subcultures in the organization. These observations agree with the findings of Harvey et al (2002) that various safety subcultures can exist within one organization.

The danger in safety cultures existing as subcultures and not as part of the overall culture is that leaders can become focused on issues other than safety and leave the wellbeing of workers to chance. This is evident in the CAIB report. The leadership of NASA became so focused on productivity, political agendas, and budgetary issues that safety was delegated to safety professionals and contractors. The end result was the death of seven astronauts (CAIB, 2003). Leadership sets the tone for the importance of safety in an organization; for safety to become part of the core values and beliefs within the system of the organization, leaders must make the concern for safety a top concern.

A safe workplace culture - An integrated culture

To integrate safety into the overall culture, the care and wellbeing of employees must be a priority. To accomplish this, leaders must understand what a safety culture is; assess the state of their organization's integration of safety in the culture, safety followers must be developed, and measurement systems put in place.

What a safety culture looks like

A culture where safety is a basic value can be recognized through four key characteristics. The approach to safety is proactive; all levels of the organization are held
accountable for results and how they are achieved; safety has the same weight as productivity and profitability when economic decisions are made; and safety policy is treated as important as other company policies (Earnest, 2000).

Eckenfelder (2000) argues that "an organization can either work downstream on behaviors or upstream on beliefs and values" (p. 43) and asserts that the best way to impact a culture is to understand the relationship between beliefs and values and outcomes. This can be done by teaching beliefs and values that focus on zero-accident workplaces. Suggest that a safety culture is both people-oriented and production-oriented; the culture is evidenced by values and assumptions including anticipation of problems before they occur, giving priority to employee's well-being, and continually stressing safe behavior over risk-taking behavior (Schneider, Gunnarson, & Niles-Jolly, 1994). The values expressed by management can be very subtle; there is a difference in establishing a culture based on the credo "we care about people" and "we do not want to get sued" (Flin & Mearns, 1999).

*Cultural safety assessment*

Denison's (1990) four views of organizational culture can serve as a model for determining how safety is imbedded in the overall culture. Qualitative questions derived from that model include: How does our organization respond and adapt to internal or external accidents? What are the ways that employees participate or become involved in formal and informal safety initiatives? What evidence exists that shows a consistent commitment to safety at each level of the organization? What is our mission around workplace and public safety?

Asking probing and open-ended questions and seeking answers from across the organization will yield much insight into the integration of safety in the organization's culture. Once the leaders have an understanding of where the organization is with respect to safety, the desired focus for safety should be established and communicated by the leaders. Leaders can overcome many of the barriers to building and sustaining a safety culture by demonstrating care for people and by understanding the concept of follower development.
**Safety leaders**

Schein's (1992) theory posits that what leaders pay attention to, measure, and control is the most powerful mechanisms leaders can to create and reinforce culture. A leader is known for what he or she pays attention to. Kragness (1994) suggests four primary focuses of leadership attention: character, analysis, accomplishment, and interaction. The leader who focuses on character will be concerned with commitment, integrity, and the ability to learn from experience. The leader who focuses on analysis will tend to have creative ideas, a well-defined vision, reliable intuition, better judgment than most people, and will have courage to face challenges. The leader who focuses on accomplishment is one who is known for getting things done. The leader who focuses on interaction is generally a motivator and pays attention to how people respond to leadership and to others around them. Managers demonstrate their commitment or lack thereof to safety through their actions (Earnest, 2000).

The leader of a culture that embodies safety is one who focuses on safety through character, analysis, accomplishment, or interaction. At times any or all of these characteristics are required to assess, develop, or sustain a culture of safety.

**Safety followers**

Follower development theory is based on the concept that individuals will take personal responsibility for their own development based on who the perceived beneficiary is (Maurer, Pierce, & Shore, 2002). Development in the realm of industrial safety may include participating in a safety committee, working on a standards committee, being asked to lead a safety meeting, participating in accident investigations or worksite inspections. Maurer, Pierce and Shore (2002) suggest that the decisions that people make about participating in development activities is related to who the beneficiaries are, whether it is self, co-workers, supervisor, or organization. The goal of most organizations is zero accidents and injuries. Workers have a direct impact on the achievement of that goal but sometimes perceive that they do not have the responsibility for that goal. By engaging individuals at all levels of the organization in safety development activities and by extending the beneficiary to the family, workers become more actively engaged in their
own development. When individuals take personal responsibility for their own safety in the workplace, the safety culture and the safety performance improves (E.S. Geller, 1999, 2000). Leaders who understand and act upon this theory may find that workers take on more accountability and responsibility for safety in the organization.

Measuring safety within the culture

Flin and Mearns (1999) question whether the "state of safety" can truly be measured in organizations. They argue that safety attitude surveys and other such quantitative methods of gauging safety are descriptive rather than normative. They call for qualitative research that includes researchers spending time in the organizations they are studying to get a feel for the culture and to understand how people interact throughout the organization. One way to quantify the measurement of safety is to include leading measures with the traditional measures of OSHA recordable accidents, accident severity rate, lost-time accidents, restricted duty cases, fatalities, and near-miss incidents observed (O'Brien, 1998). Lagging indicators do not provide insight into aspects of the safety culture (Flin & Mearns, 1999) such as insurance rates, employee involvement and morale, presence of a safety manual, and frequency of safety meetings (O'Brien, 1998). The measurement system can be very simple or quite complex; the more complex the system, the more advanced and subjective the measures. Subjective measures may include safety perceptions of employees. Proactive measures can be implemented in small increments and may include a movement from the traditional measures to leading, behavior, and activity-based measures. Cooper (2001) suggests proactive measurements:

1. the number of weekly safety inspections
2. the number of audit topics examined
3. the number of safety-trained personnel
4. the number of personnel who received refresher training
5. the number of risk assessments conducted and reviewed
6. the number of standard operating procedures reviewed
7. the number of corrective actions completed
8. the number of near-misses reported
9. the number of safety-related suggestions received

Analysis of the proactive measures against the reflective measures can provide information about where the greatest impacts are occurring (Cooper, 2001). Proactive measures help keep the focus on the safety process rather than on the safety compliance record; the focus is on the behaviors rather than on the outcomes and the reward can be for engaging in safe behavior. The use of appropriate proactive or leading measurements can lead to a greater understanding of the impact of and need for policy strategy, goals, and plans; increased health and safety expertise; increased visibility and involvement of management; improved motivation and attitudes of employees; enhanced identification of hazards and risks; and effective reporting and investigation of near-misses and accidents; and communication of results (Flin and Mearns, 1999). Proactive measures give executives and managers a sense of what has been done rather than what has been avoided (Cooper, 2001) and help them understand how well efforts to bring about a safety focus in the overall organizational culture.

Issues in integrating safety in the culture

Companies are faced with many pressing issues at any given time (Ulrich, 1997); the tendency may be to wait until the "perfect time" to implement a focus on safety in the organization's culture (Minter, 2003). Executives can overcome this tendency by making safety part of the major priorities alongside of productivity and profits.

Many organizations are facing downsizing and outsourcing, resulting in the use of outside contractors. Clarke argues that the viability of a positive safety culture in diverse workforces where permanent employees are being replaced with contract employees is difficult (2003). Safety can be dealt with as a key factor in decisions to hire contract companies or individuals and performance standards established that make safe practices a condition of doing business.

The workforce may be resistant to make safety a priority. An emphasis on safety may mean changed work procedures, required use of personal protective equipment, and a perceived
intrusion by management on the work (Daugherty, 1996; Gherardi & Nicolini, 2000). This resistance can be overcome by involving employees in safety committees who help design new work procedures or who work with personal protective equipment manufacturers on equipment specifications or selection.

An even more difficult issue is that some executives simply do not care about safety as a high priority (Clarke, 1999). This is particularly difficult in industries where workers are exposed to dangers. Worker commitment to safety is directly related to employee attitudes which in turn are modeled in terms of management actions for safety, the quality of training, and their own safety behavior (Cox, Tomas, Cheyne, & Oliver, 1998). When the executive does not care about safety, it is likely that the employees will not either. There are no easy or prescriptive ways to deal with this barrier; an accident or fatality may create more awareness.

Summary

Organizational culture and safety cultures are not two mutually exclusive constructs. Yet, because there may not be a cohesive focus in an organization where safety is a concern of the individuals and certain departments, subcultures may emerge. However, it is possible to move toward an overall organizational culture that embodies safety as a core value.

This extension or enhancement of the culture will likely be a slow process that takes a strong commitment on the part of organizational leaders. Leaders can take specific steps to make safety a priority.

Conclusions and suggestions for future research

The author has observed many organizations, primarily electric utilities, throughout the previous three decades. It is rare to find an organizational culture that contains a strong value of safety that is imbedded in the core values and that is manifested throughout the organization in the artifacts, stories, and other observable components. Subcultures of safety exist in areas of these companies where people are exposed to serious danger on a daily basis.
Additional research is recommended to understand the link between organizational culture and safety as a core value or as a subculture. More research into how to effectively include safety in a strong organizational culture where safety is not already a core value is also recommended. The author also encourages research into how human resource and safety professionals can collaborate to champion safety as a core part of organizational culture when there are no executive champions.
References


