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Building an Ideal Safety Culture

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ABSTRACT

Organizations have historically focused on improving safety by addressing the work environment. Eliminating/mitigating hazards, providing better tools and equipment, and developing and enforcing safe procedures are all approaches that have understandably worked well at improving safety. But many organizations have reached a plateau, finding that relying primarily on these approaches without taking a more comprehensive view of safety produces only marginal gains. This paper will focus on the most important components of the environment (e.g., The Ideal Safety Culture) to most effectively support safe performance within an organization. These components of an Ideal Safety Culture include: Leadership, Systems, Behaviors, Employee Engagement, Internal Person Factors, and Physical Conditions. The concept of Internal Person Factors will also be integrated into a behavioral framework.

Keywords: Safety Culture, Behavior-Based Safety, Person Factors, Leadership, Systems Perspective.

INTRODUCTION

Traditionally, behavior analysis has had an individual perspective. It has also been claimed, that from a behavior analytic perspective, there is no such thing as "organizational behavior" and from this logic, the concept of "organizational culture" would also be discounted. Instead, it is claimed that individual behaviors occur within the context of certain environments [1]. As this paper will discuss "Building an Ideal Safety Culture" the first task is to define what is meant by safety culture. From this perspective safety culture refers to the overall environment within which either safe or at risk behaviors are more or less likely to occur.

Garnering insights from a 20 year career as a Behavior Based Safety (BBS) consultant, Figure 1 illustrates the most important components of the environment (e.g., The Ideal Safety Culture) to most effectively support safe behavior within an organization.

An ideal safety culture would develop continuous improvement activities around at least six components of safety, including: Leadership, Systems, Behaviors, Employee Engagement, Internal Person Factors, and Physical Conditions. The most controversial

component from a behavior analytic perspective would seem to be Internal Person Factors. Therefore, this will be the first component discussed in detail.



Figure 1: Components of an Ideal Safety Culture.

INTERNAL PERSON FACTORS

An example of how perceptions can be used when developing behavior-change interventions is illustrated by a series of questions often given as part of a safety perception survey, often given before implementing a BBS process [2]. Respondents are asked 1) if they feel employees should perform a certain safety-related behavior (e.g., “Employees should caution their co-workers when they are observed working at-risk”), 2) if they are willing to perform the behavior (e.g., “I am willing to caution my co-workers about working at-risk”), and 3) if they do perform the behavior (e.g., “When I see a co-worker working at-risk, I caution him/her”).

As shown in Figure 2, the results of over 200,000 respondents show most people respond favorably to the first two statements. Most have the necessary values and intentions. But far fewer respondents agree with the final statement, indicating there

are personal and organizational barriers to actually performing these critical safety behaviors.

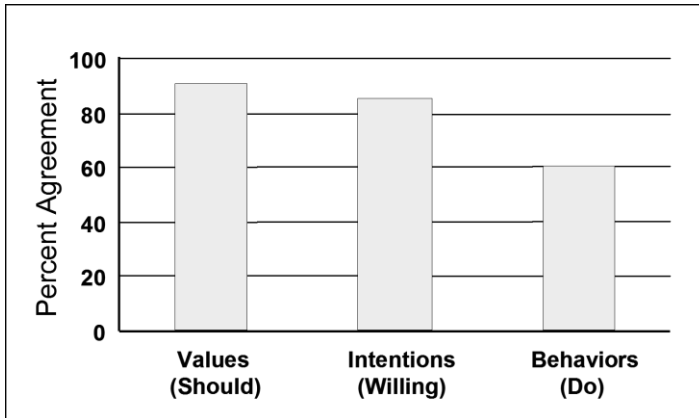


Figure 2: Responses vary when asked whether one "should", "is willing", and actually "does" intervene to help others.

Analogous to Gilbert's PIP (performance improvement potential) described in his classic text, *Engineering Worthy Performance* [3], the difference between the "should", "willing", and "do" can be used to estimate the potential for improvement, as well as informing ways to design the most appropriate intervention strategy.

When employees feel they should or are willing to perform these behaviors more than they currently do, a potential for relatively quick improvement can be expected following basic education and training. But if employees say they don't feel they should, they are not willing, and they actually do not perform such behaviors, more one-on-one coaching is called for.

In addition to the internal person factors (e.g., feelings about one's self), people's beliefs and expectancies about the situation are also important. To motivate someone to take action, several beliefs or expectancies are helpful. First, you would need to be convinced "it (e.g., injury/negative outcome)" could happen, then you would need an adequate level of Self-Effectiveness (e.g., the belief that I can do it as mentioned above), but also feel Response Effectiveness or the belief that "It" (the behavior, procedure, equipment, or safeguard) will work to prevent the negative outcome, and Outcome Expectancy (the belief that "It" is worth doing) meaning the benefit of preventing the negative outcome is worth the cost [4, 5].

Incorporating Person Factors into a Behavioral Framework

One possible explanation of how person factors function is to consider them establishing operations (i.e., setting events). A setting event is an environmental event, operation, or stimulus condition that affects an organism by altering (a) the reinforcing effectiveness of other events, and (b) the frequency of occurrence of that part of the organism's repertoire relevant to those events as consequences [6]. In other words, setting events are conditions that make rewards more or less reinforcing. For example, if a person has not eaten for several hours, a setting event is established which increases the reinforcement value of food. Along these lines, having a high sense of belonging could set the stage for pro-social behavior or make helping behavior more rewarding. Furthermore, if you like certain people (e.g., members of your in-group), helping these individuals is likely to be more internally rewarding than if you do not like them or have neutral feelings towards them.

Likewise, feelings of self-efficacy ("I can do it"), personal control ("I'm in control"), and optimism ("I expect the best") could make job enrichment (i.e., expanded duties and the offer of new challenges) more rewarding. For example, a key element of a BBS process is for co-workers to observe each other, identify both safe and at-risk behaviors, and give appropriate rewarding and corrective feedback. Some people are confident in their ability to identify both safe and at-risk behaviors as they observe a co-worker, whereas others feel they do not know another's job well enough or that they are not effective communicators. Therefore, for individuals low in self-efficacy, personal control, and optimism, the probability of internal reward would seem lower, therefore, less likely to occur than for individuals high in these person factors.

One of my favorite quotes from W. Edwards Deming [7] is: *"It is more important to have an imprecise measure of the right thing than a perfect measure of the wrong thing."* This quote is relevant here because although it is difficult if not impossible to get a true measure of the level of person factors contributing to an ideal safety culture, these factors are part of the "right thing" we need to consider when developing behavior change activities.

LEADERSHIP

The most effective leaders go beyond a focus on outcome numbers to hold people accountable for accomplishing proactive process activities and behaviors that contribute to eventual group and organizational success in productivity, quality, and/or safety. The role of integrating safety activities as part of the job often falls to the supervisor. However, if supervisors are not currently focusing on safety themselves or not guiding employees on how they should make safety a key part of their jobs, it is not necessarily because they don't care about safety.

The most likely reason a supervisor would not perform or focus on the behaviors most critical to show support for safety is because more senior leaders have not identified and adequately defined the supervisory behaviors most likely to show support for safety, has not set the expectation that these behaviors be performed, and has not given the supervisor feedback as to whether these behaviors have been occurring.

SYSTEMS

Organizations rely on a number of safety management systems to manage risk and thereby decrease the chance of incidents and injuries. These systems generally include *safety rules and procedures, safety training, hazard identification and correction, discipline, incident reporting and investigation, safety communications, safety suggestions, and rewards / recognition*. Each safety management system has an important contribution to make in terms of not only improving workplace safety, but also influencing an organization's safety culture.

At best, when the system is poorly designed or operating ineffectively, its benefits will be lost. At worst, a poorly designed, badly implemented, or ill-functioning system can actually have a destructive influence on the organization's overall safety culture. To further compound the situation, these systems are interactive and, in many cases, overlap. For example, *hazard identification and correction* requires an atmosphere fostering *employee participation*, sufficient *training* so employees can recognize and correct hazards, ample *communication* of the hazard, and its sufficient resolution. Poor features of one system may have negative influences on other systems, making the problem areas more difficult to isolate and correct. Therefore, an ideal safety culture will not only have well functioning safety management systems with regard to performing its primary function, but will also work together with other systems in an way to move the safety culture forward.

BEHAVIORS

Some at-risk behaviors can be easily changed (e.g., by showing someone a new/clearly better procedure, providing someone new tools/equipment, pointing out a previously unrecognized hazard). Other at-risk behaviors can be very difficult to change because at-risk behavior is often more comfortable, more convenient, faster, or easier. We also have past and present reward structures, past learning and habits, and cultural influences that may promote the maintenance of at-risk behavior. There may also be significant barriers preventing the desired behavior (e.g., employees are using the wrong tool because the correct one is unavailable).

Therefore, before attempting to change an at-risk behavior to avoid a certain hazard,

other considerations should typically come first. That is, before attempting to change behavior to avoid a hazard, other interventions should be considered. For example, below is a commonly used intervention hierarchy [8]:

1st - Eliminate the hazard (substitution of materials, automation)

2nd - Engineering controls (guarding, interlocks)

3rd - Warnings (signs, alarms)

4th – Behavior change to avoid the hazard, administrative controls, and training (following procedures, job rotation, lockout/tagout training, equipment inspections)

5th - PPE (eye protection, respiratory protection, fall protection)

This hierarchy clearly regards behavior change and PPE as the least effective. However, it is not always feasible to eliminate all hazard, remove people from all risky environments, or provide engineering controls to create an acceptable risk level. Therefore, even when workplaces have been ‘designed’ to reduce hazards, incidents and injuries still occur. Complex systems require a great deal of human contribution to maintain productivity, quality, and safety. Human error is the inevitable by-product of our necessary involvement in complex systems. To eliminate human error would require us to eliminate the best source of creativity, flexibility, and problem solving ability. People are not perfect and will occasionally make mistakes despite their best intentions and working in the best of surroundings.

This is not intended to indicate a blame of employees, but to highlight the need to focus on understanding when and why at-risk behaviors occur. Many misunderstand a focus on at-risk behavior as an attempt to blame employees for injuries and other incidents without placing the appropriate focus on the system factors that may have motivated, encouraged or even forced the at risk behavior. In fact one of the most common misperceptions of BBS is that it focuses on employee behavior at the exclusion of organizational or system factors to control hazards. This is no doubt the result of poor applications of BBS processes in the past or misinterpretations of the basic principles of BBS.

Instead, the opposite is actually true. When BBS is implemented correctly, although it typically will focus on behavior as a starting point, a proper analysis of the behavior will identify the full variety of contributing factors influencing that behavior and will logically lead to a variety of corrective actions based on the reasons they are occurring.

EMPLOYEE INVOLVEMENT AND OWNERSHIP

When the development of an action plan involves the people expected to carry out that plan, ownership for both the process and the outcome is likely to develop. In other words, when leaders give a reasonable rationale for a desired outcome and then offer

opportunities for others to customize methods for achieving that outcome, they facilitate internal or self-directed motivation [9].

While working with a group of executives recently, the CEO was speaking to the presidents and VPs of each of their divisions and subsidiary organizations. When referring to employee involvement he announced to the group ... *“I know you all, I’ve worked with each of you, and to be honest, you’re just not that smart! If we are to become world class with regard to safety, we need help and input from everyone in the organization, especially those with the time and experience doing the hazardous work...”* . Although the insult was said in jest, the point was made and accepted by all in the room.

PHYSICAL CONDITIONS

Although a work environment that minimizes, contains, or controls serious hazards should be a necessary precondition for an ideal safety culture. We need to consider how safety is supported or inhibited through the interaction of equipment, facilities, procedures, and people. A proactive approach addresses these factors before an injury occurs, instead of waiting until someone gets hurt before analyzing what went wrong. By taking a proactive approach to the physical environment, new and improved rules/procedures, equipment fixes, and hazard controls are developed before injuries have a chance to occur.

Employees at all levels of the organization need to continually search for, discuss, and help to remove workplace hazards. In order for this to happen, we need to create a culture that moves beyond mere hazard recognition skills to a culture of people with the compassion and courage to speak up and identify work environment and situational concerns. There also needs to be a history of taking concerns seriously. Employees need to see that voicing such concerns leads to serious consideration of the issues and to beneficial change.

CONCLUSIONS

Reducing injuries requires a comprehensive view of safety as an interaction of the physical environment/conditions, leadership, organizational systems, the behaviors of all people in the organization, employee engagement, and people (their knowledge, skills, and abilities, but also how people feel about what they are doing). Only by treating safety as multidimensional and ensuring the principles of an ideal safety culture are integrated into each dimension will we continue to see sustainable and continuous improvement in this critical area of organizational and human performance.

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AUTHOR – INVITED SPEAKER



Steve Roberts is co-founder and senior partner at Safety Performance Solutions, Inc. He earned an M.S. in Industrial/Organizational Psychology from West Chester University and an M.A. and Ph.D. in Applied/Experimental Psychology with a focus in Organizational Behavior Management from Virginia Tech under the guidance of Dr. Scott Geller. His areas of expertise include the design, implementation, and evaluation of behavior and people-based safety processes, the assessment of

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Before co-founding Safety Performance Solutions in 1995, Dr. Roberts was a research associate with Management Systems Laboratories (MSL) and the Center for

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Steve has published articles in a number of peer reviewed academic journals including American Journal of Health Promotion, Applied and Preventive Psychology, Journal of Organizational Behavior Management, and Journal of Safety Research, as well as Safety + Health and Security Management magazines. Steve also authored the book chapter *Actively Caring for Occupational Safety: Preventing Injuries with People Based Safety*, in Dr. E. Scott Geller's 2013 book *Actively Caring for People: Cultivating a Culture of Compassion*.

Steve serves as a consultant to a wide variety of industries and is a regular speaker at both public and corporate sponsored events. Steve has taught the American Society of Safety Engineers (ASSE) Seminarfest course *People-Based Safety* each of the last 8 years, most recently in January 2014.