

MANAGEMENT'S IMPACT ON BEHAVIORAL SAFETY

By GREG A. BARRETT

Management does not always see how its control of the safety system impacts behavioral safety. Often, the result is a long-term energy drain on behavioral progress, which may be fatal because it causes employees to lose faith in the system. For behavioral safety to have a lasting impact, management systems must promote permanent change. Furthermore, managers must see the connection between their control of the system and real change, and employees must understand how they fit into the process.

SAFETY MANAGEMENT TRIAD

To succeed, any safety management system must address the three key areas of the safety management triad (Figure 1).

People, which encompasses attitudes, values, training, pace, prejudices, locus of control and experience.

Environment, which includes equipment design, layout and condition, housekeeping and weather.

Policies/Procedures, which includes those policies, procedures and practices (written and unwritten) that allow people to successfully interact with the environment.

These three elements combine dynamically to produce the antecedents that direct behavior and the consequences that drive it. Current safety approaches address these areas through training, safety committees and behavioral processes (people); walkthrough inspections, process hazard reviews and maintenance

notifications (environment); and operating procedures, job safety analyses and audits (policies and procedures).

THE SYSTEM AT WORK

Suppose Jack, a training professional, works in a new environment with an overhead projector; its electrical power cord extends to an outlet nearly 10 feet away. Jack uses the projector each day and must step over the cord frequently to avoid tripping. Furthermore, the room's lighting is substandard. What elements of the triad are at play?

First, the *environment* presents hazards—inadequate lighting and a potential tripping hazard.

Lack of *policies and procedures* have allowed this setting to exist. No use assessment was performed to determine proper design. Once construction was complete, no pre-startup walkthrough was performed to detect potential hazards. Nor was any procedure established for Jack to step safely over the cord. Finally, the maintenance and capital expenditure systems were unprepared to address the hazards once they were identified. As a result, the hazards persisted.

With respect to the *people* element, Jack must interact with the environment by using his training and experience to step over the cord safely.

Who controls the environment that prompts Jack's behavior? Management. Who controls the policies and procedures? Management. Who controls Jack's behavior? Jack, in that he must remember to step over the cord each day.

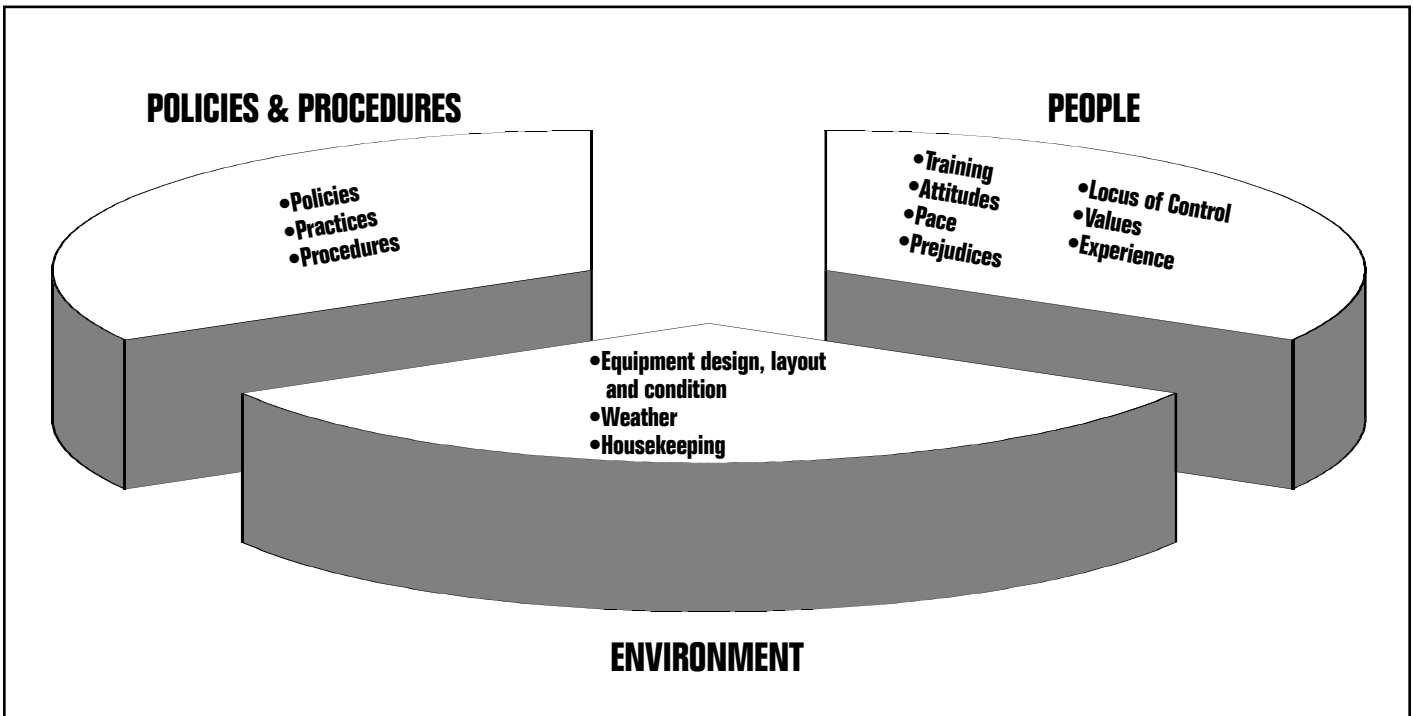
To understand Jack's role in this setting, examine Figure 2 (modified from Covey's Circle of Influence and Circle of Concern concepts). The Circle of Influence includes those factors over which people have some control. In this case, Jack directly controls his own behavior; each day, he interacts with a defective environment by consciously deciding to step over the cord. In essence, he makes a behavioral risk assessment and takes proper action. Suppose he also exercises his Circle of Influence by notifying maintenance that the cord needs to be rerouted (e.g., overhead via conduit) and the lighting improved.

Within Jack's Circle of Influence exist some areas over which he has some *influence*, but not direct control. In this situation, Jack should champion the effort to change the environment by checking on the progress of his request. He does not control this progress, but may be able to influence how fast the change is made by actively caring (Geller).

How does management influence Jack's behavior? Clearly, management must ensure that the work environment is reasonably hazard-free. It holds the authority and controls the resources that define the environment. If management elects not to spend the money, the hazard will not be addressed.

Although management may solicit employee input on the creation of policies and procedures, it has the ultimate authority to decide what procedures are established. Even unwritten practices are reinforced by the culture that manage-

FIGURE 1
SAFETY MANAGEMENT TRIAD



ment allows to exist. Therefore, management must ensure that policies in place help identify and resolve hazards.

Suppose Jack's maintenance request is ignored or not acted upon promptly. Will he be motivated to notify anyone the next time he identifies a hazard? Not likely. When employees identify hazards yet see no action, they grow frustrated. As a result, they may develop shortcuts or unsafe alternatives.

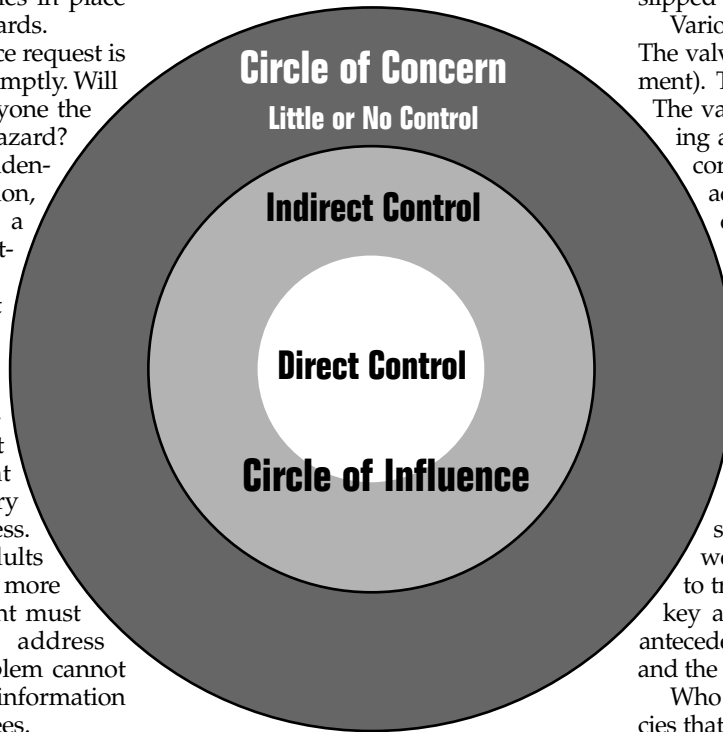
Therefore, not only must management ensure prompt response, it must create feedback systems to motivate employees to actively participate. This is crucial. Most employees recognize that management cannot fix every problem and stay in business. But treating employees as adults means management must do more than just say no. Management must explain its decisions and address employee concerns. If a problem cannot be addressed promptly, that information must be shared with employees.

CASE STUDY: FALL FROM PIPE RACK

Consider this real-world example of the safety triad at work. A late-shift operator determined that he needed to reroute product flow in a new addition to a chemical process. This required that he open a valve located 10 feet above the floor.

The safe way to access the valve would be to use a ladder. At this facility, however, ladders were locked in the maintenance

FIGURE 2



building, which was several hundred yards away. To retrieve a ladder, the operator would need to obtain permission from his supervisor, get a key from security, go to the maintenance building and return with the ladder—a 20- to 30-minute process. Then, he would use the ladder to access and open the valve—a one-minute job—and return the ladder.

Instead, the operator chose to climb on

some nearby piping. While descending, he slipped and fell, fracturing his wrist.

Various factors affected this situation. The valve was difficult to access (environment). This was a new process addition. The valve position had been noted during a pre-startup walkthrough, but no corrective action had been taken. In addition, in-place policies made it difficult to retrieve a ladder.

To understand the people element, an ad-hoc team performed antecedent-behavior-consequence (ABC) analysis (Figure 3). Remember, antecedents *direct* behavior but consequences *drive* behavior. The strongest consequences are soon, certain and positive (to the person performing the behavior). As Figure 3 shows, the strongest consequences were those of convenience—no need to track down the supervisor, obtain a key and retrieve the ladder. Acting as antecedents were the perception of pace and the poor location of the valve.

Who is responsible for creating the policies that made it inconvenient to retrieve a ladder? Management. In this case, the ad-hoc team recommended that ladders be placed in each unit and color-coded to identify their proper location.

Who is responsible for not promptly addressing valve location? Management. In this case, the valve was moved the next day. In addition, this facility is investigating how walkthrough items are addressed in order to improve the timeliness of corrective action.

FIGURE 3
AT-RISK BEHAVIOR

Antecedents	Behavior	Consequences	Strength		
			S	C	P
1) Pace. 2) Production over safety priority perception. 3) Complacency (never been hurt before).	Take at-risk position to access valve.	1) Positive peer pressure rewards operator for being fast.	-	+	+
		2) Supervisory pressure.	-	-	-
		3) Convenience (ladders not easily accessible).	+	+	+
		4) Possible injury.	-	-	-

SAFE BEHAVIOR

Antecedents	Behavior	Consequences	Strength		
			S	C	P
1) Slower pace. 2) Training. 3) Recognition of hazard.	Access valve safely.	1) Make ladders easily accessible.	+	+	+
		2) Make valves easily accessible.	+	+	+
		3) Peer pressure encourages safe behavior.	-	-	+
		4) Supervisory pressure encourages safe behavior.	-	-	+

S = soon C = certain P = positive

Who is responsible for climbing the piping? The operator. The operator's responsibility in deciding to climb cannot be discounted; however, management must understand how it influenced that behavior through its actions—or inaction.

In this case, the ad-hoc team recommended that management take steps to reinforce accountability issues with operators regarding use of ladders, manlifts, scaffolds, fall protection and related safety measures. It also noted that management must ensure that accountability is "felt" by all employees in a fair, equitable manner. Otherwise, the underlying culture will not change. It is not enough to simply say, "We now hold you accountable."

TRUST IS KEY

Behavioral processes work best when a high degree of trust exists between management and employees. Done correctly, behavioral processes can inspire trust. If one (or both) parties fail to do their part, however, trust is diminished. When this occurs, employees grow tired of "bucking the system" and management sees no lasting change. This leads to a long-term energy drain that can kill a behavioral process.

For example, in one facility, a piece of equipment located in a highly congested area had caused several injuries over a period of years. Initially, employees offered suggestions for improving its design, but no action was taken.

Subsequently, they developed at-risk

shortcuts to work around their concerns. These behaviors were consistently noted during behavioral observations, but the workgroup lacked the resources and authority to implement change. In time, employees simply gave up.

As a result, they reverted to prior, more-convenient behavior. Participation in behavioral workgroups declined because employees questioned their value, while management fumed because behavior was not improving.

Employees must recognize that they can act to defeat any system management implements. Typically, employee behavior falls into one of two categories:

- Category 1: Behaviors that result from lack of training, focus, awareness or skill.
- Category 2: Behaviors that result from a purposeful decision to ignore established safety systems.

Employees earn management's trust when they pay attention to training, arrive at work ready to perform and actively care about each other. Such behaviors negate Category 1 accident causes because behavioral risk assessments are being performed and employees are modifying their behavior to avoid risks. Category 2 behaviors destroy trust.

Behavioral observations can also identify deficiencies in the environment and in policies and procedures. Unless management promptly resolves these problems, employee distrust will grow. People only participate when they perceive value.

CONCLUSION

Behavioral processes may achieve short-term gains. In the long run, however, the management systems must be in place to ensure success. If management does not make the connection between management systems and behavior, employees will eventually lose faith in the behavioral process and the process will falter. Often, this merely prompts a change in consultants rather than increased attention to real system issues.

Potential users of behavioral processes should recognize that, due to system issues, full process implementation is not always the best course of action. However, behavioral education and training can contribute to injury reduction. By building trust and avoiding an "us vs. them" mentality, both management and employees can create the proper behavioral consequences that lower resistance to change and drive the behavioral process to maximum fruition. ■

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