Leading Thoughts

Using Scenarios to Align Safety Leadership
How Awareness of Cognitive Bias Improves Decision Making
By Jim Spigener

It is a common theme: A senior leader makes a safety-related decision and expects a specific outcome or at least progression toward a goal, but his/her directive flies past the workforce, not even making a dent in employee behavior. For the leader, this is inexplicable and frustrating; not understanding why employees do not appreciate the efforts to improve safety can be frustrating. From the employees’ perspective, the leader’s decision only reinforces the belief that s/he does not truly value their safety. After all, why would the leader’s decisions undermine a shared goal if s/he really cared?

This is a problem of misalignment. The leader’s decision-making strategy, while well meaning, can work against the original intentions and objectives, and send the wrong message to employees. The leader may believe his/her decisions will advance safety when in fact they undercut progress and disharmonize individuals. This article explores how misalignment develops and offers corrective mechanisms that refine a leader’s situational decision-making practices to better support safety.

Situational decision making is a skill that leaders should master if they want to restore uniformity between intention and action, send a consistent message to the workforce and create behavioral reliability on the shop floor.

How We Create Inconsistency

No leader wants his/her decisions to run counter to his/her goals or make workers feel as if the leader does not care about their safety. Unfortunately, this happens often. When it comes to safety, what we do not know can hurt us and others.

Many safety-related decisions require leaders to make accurate judgments about future likelihoods. After an undesirable outcome, it often seems clear what should have been decided. When analyzing what was known before the event, it is often discovered that the team already had the information needed to make a safety-supporting decision, but it was ignored. Why? A rich scientific literature in cognitive psychology helps explain this seemingly irrational phenomenon: humans tend to make inaccurate judgments about future probabilities in predictable ways. These tendencies toward faulty judgments are called cognitive biases, and they can lead to serious safety problems.

Hidden Traps in Decision Making

Cognitive bias refers to systematic distortions of decision making that are common to all humans. These distortions arise from the built-in heuristics used to simplify the large quantities of data with which our nervous systems routinely deal. Some researchers also include emotional prejudice as a mechanism underlying some of these biases.

Whatever their underlying causes, these errors of judgment can impair leadership performance, and distort safety-related decisions. Fortunately, although people are by nature disposed to sometimes make these errors of judgment, they are not inevitable.

Usually, with the benefit of a high-quality root-cause analysis, one can see the alternative course or other decisions that if made would have prevented the incident. Then, leaders realize judgments that were incorrect—and preventively so. Such flawed judgments usually concern the assessment of future probabilities. If no adverse events have occurred at a particular site for the past 6 months, does that mean the area is safe? If an adverse event happens for the first time, how likely is it a fluke?

Leaders can make most decisions without a purposeful consideration of cognitive bias. Cognitive bias can be disastrous, however, at critical decision points. Therefore, it is important to appreciate the role that cognitive bias can play. Cognitive bias can cause an underestimation of exposure risk and an overestimation of the capability of systems to mitigate hazards. While any single decision may be insignificant by itself, a series of small, incorrect decisions may create a path to disaster.

Understanding cognitive bias improves decision making. Knowledge of cognitive bias positions a team to intentionally question its own thinking and to isolate biases that increase hazards caused by poor decisions. Understanding the various kinds of cognitive biases helps leaders give due consideration to them when making crucial decisions.

Jim Spigener is senior vice president at DEKRA Insight (www.dekra-insight.com). He has experience coaching senior executives with safety leadership and culture change, and works with senior executive teams to develop strategies for high-performance organizations. He is a member of ASSE’s Gulf Coast Chapter and Consultants Practice Specialty.
Humans are not infallible, in part because of how we process information and make decisions. People are prone to cognitive biases because of how certain brain mechanisms work to accomplish two important tasks: 1) make the complex world simpler and more predictable; and 2) understand new information as it arrives by making it consistent with past information.

Cognitive biases are automatic and unconscious. One can gain a sense of the biases’ automatic, unconscious quality by imagining that a patient has a serious, fatal illness. The doctor asks the patient to sign a consent form for a proposed treatment that is especially unpleasant and carries some risk of making the condition worse. Suppose the doctor says, “In cases like yours, the treatment is successful more than one-third of the time.” Research shows that if the doctor phrases the information that way, patients are more likely to consent than if the doctor says, “In cases like yours, the treatment fails nearly two-thirds of the time.” The facts are the same in the two statements. The difference lies in the automatic ways everyone processes the descriptions. Hearing the treatment is “successful more than one-third of the time” allows patients to accept the risk and ask for the treatment. Given the identical facts stated as a “nearly two-thirds chance of failure,” patients usually decline the treatment.

Although cognitive biases are usually not conscious, in the sense of immediately present to conscious awareness, they are not unconscious in the Freudian sense: There is nothing blocking awareness of them. Normally, people attend to what they perceive and think. They pay less attention to how they perceive and think. When people do so, they can become directly aware of cognitive biases.

Cognitive biases reduce the sense of uncertainty, despite the fact that uncertainty is a central reality in decision making. Every day, leaders make decisions under such conditions. Operational and safety leaders must satisfy multiple constituencies and meet budgets and schedules while simultaneously managing the risks inherent in the working interface. Senior leaders make decisions that affect the health of the enterprise in the midst of inconsistent market trends, gloomy economic forecasts, and increasing pressure from shareholders, customers, their consciences and their employees, all while facing daily demand to be completely competent and in full control. While cognitive biases may distort how people perceive the world, the biases move people forward in difficult situations.

**Biases That Affect Decision Making**

Many cognitive biases have been identified, and some are known in the literature by different names. Thus, their definitions may be difficult to distinguish from one another. Following are biases that are important for creating consistency around safety-related decisions. While reading through the descriptions, do not try to memorize every cognitive bias. Rather, study how these biases function in decision making. Look for how they enable a person to move forward in the face of uncertainty and how they can also produce errors of judgment.
Anchoring

Anchoring describes the tendency to give disproportionate weight to the first information received or to a specific piece of information over all others, allowing the initial or preferred information to anchor subsequent judgments.

When faced with an incident or when discussing what to do about a safety problem, how often does the first idea for which there is some evidence capture the group’s attention and come to dominate subsequent thought, discussion and action to the exclusion of other causes, such as cultural and systems issues?

Attribution Error

Attribution error biases operate through the tendency to understand one’s own success in terms of personal powers and abilities while seeing one’s failings as the result of bad luck or external, situational causes. Conversely, we also suffer from the tendency to explain others’ failings in terms of dispositional factors (e.g., internal factors such as personality or an inadequate sense of responsibility).

For example, if someone else, particularly someone you do not like, is in a car crash, it is probably because s/he is a bad driver. If you get into a car crash, it is because the roads were slippery. This bias is self-serving because it excuses one’s own failings while blaming others for theirs. It leads immediately to (spoken or unspoken) blame as the first response to a problem.

At the group level, the group attribution error acts in the same way to protect a group’s identifications from members of other groups—whether defined by race, gender, belief system or in other ways. This phenomenon creates the in-group bias.

In-Group Bias

In-group bias is the tendency to give preferential treatment to members of one’s own group. This bias strengthens subculture alignment at the expense of alignment with the larger culture. For example, it may pit supervisors against line employees or line employees against management. In an unhealthy culture, in-group bias can defeat the successful investigation of incidents when those involved act to protect group members.

Recency Bias

Recency bias (or availability/nonavailability) is the tendency to rely on information that is most readily available (e.g., most noticeable or recent) and, therefore, easiest to remember, while neglecting less readily available data. Recent success may not always be a good indicator of what to do now. Examine a longer history of factors and consider how current conditions are contributing to the options.

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Sunk-Cost Bias

Sunk-cost bias is the tendency to make choices that support past decisions and escalate commitment to a course of action in which time, energy, reputation or money has been invested—even when information indicates this course of action may be a mistake. This bias manifests itself as a lack of flexibility (e.g., a difficulty recognizing when to change course). For example, a leader may not comprehend that the safety data are flashing warning signals about the course of action to which s/he previously committed.

Overconfidence Bias & Optimism Bias

Leaders tend to overestimate the accuracy of their own predictions, perceptions and judgments as well as the strength of their abilities, even when faced with evidence to the contrary. Similarly, leaders tend to be overly optimistic about the success of a course of action that they have committed to.

In safety, these biases may appear as an inability to see the warning signs that an intervention is not working. Perhaps, for example, the leader assumes that because s/he has deployed the intervention the organization is following it, but the leader fails to notice the telltale signs that it is not. These biases can also color how leaders estimate an intervention’s likelihood of success.
Rosy Retrospection
The bias of rosy retrospection is the tendency to look back and remember the “good ol’ days.” Successes with a procedure or system are remembered more readily than the failures. This predisposition distorts judgment when contemplating giving up a familiar procedure in favor of a new one. It may even blind us to the failure of the familiar procedure to produce the outcomes we ascribe to it. It is part of what motivates resistance to change.

Better Safety Decisions
Through Scenario-Based Learning
Understanding cognitive biases is the first step to improve consistency between one’s intentions and decisions. A leader can encourage people to question their choices, present counter arguments and explore alternatives. This will unpack the thinking process, make it clearer and root out biases while improving situational decision making.
To build a solid foundation for success, however, a more focused approach is needed. Many organizations use learning scenarios to align leadership with safety and advance individuals’ understanding of how decisions seemingly unrelated to safety impact it.

A wealth of educational and organizational research shows that learning through scenarios or stories can have a profound and long-term impact on people. This is especially true when the learning is centered on issues that are significant to learners and are likely to have a meaningful effect on goals that are important to them.

The process is also designed to create a context for advancing leadership skills while educating executives on how to make effective safety decisions. When leaders’ messages are consistent, they are more effective at creating a high-functioning culture that excels at protecting employees, customers and the organization itself. Aligning decisions with the organization’s values and goals for safety is not a one-shot solution, but a process of learning and shaping responses.

Through a collective focus, open communication and safety decision-building exercises, the process helps build a culture that is proactive, engaged and effective at problem solving.

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process is transferable; it provides a model for developing a learning organization that can be applied beyond safety within all organizational levels and groups, and to any problem the company encounters.

How It Works

Scenario-based learning provides an introduction to the principles and practices for using scenarios to develop skills aimed at addressing decision making, particularly around safety. Once leaders are trained in the process, they can apply their knowledge to all aspects of organizational functioning.

The scenarios align and develop a more consistent approach to situational decision making by setting up a leadership dilemma, providing facts and asking leaders to make choices around issues such as budget, promotion parameters and workforce reduction.

Safety scenarios can be integrated into the work that senior leaders do every day. This hands-on approach helps leaders not only identify how their decisions influence safety but also know how to make the right choices that will show their commitment to the workforce and increase behavioral reliability.

Whether it be a shift from a production-first mentality to a view that safety is integral to the success of production or a maturation from a culture of compliance to one that is committed to safety, leaders can drive change through how they communicate concerns, listen to subordinates and encourage discretionary efforts.

Consistency Requires Leadership Responsibility

Safety scenarios are a critical component of leadership development and better situational decision making, but to get the most out of them, leaders need to recognize their personal responsibility for safety.

Five years after Deepwater Horizon, a focus on outcomes over process is still evident. In many places, the conditions that create exposures to serious injuries persist, glossed over by strongly worded pieties about safety first. The discussion in many circles still comes down to how to get workers to take more responsibility for safety, rather than how to understand and influence the organizational culture that creates hazards.

Leaders have a responsibility to provide employees with a safe workplace. Shifting this responsibility to workers or, worse, blaming them for injuries and occupational incidents, is a sign of deep cognitive dissonance within the safety field generally and a failure of safety leadership specifically. Leaders accept accountability when they learn how to make better decisions through scenarios and actual practice. Furthermore, they can begin to close the gap between intention and action.

The Road to Consistent Leadership

Leaders tend to make decisions with the best of intentions, doing their upmost to ensure optimal outcomes. Naturally, future results can never be known at the time a course is chosen. But, along the road people can learn from what worked in the past and what did not. Mistakes can be the wisest teachers.

When safety outcomes do not line up with desires, it is important to examine oneself before becoming frustrated with employees. Leaders can ask themselves, What mistakes are being made around safety-related decisions? How can safety communication improve and how can we ensure that it is not just lip service? How can one be a better leader and align intentions with actions?

Mistakes help guide us. Leaders can learn to pull safety into their thought processes and apply their seasoned experience to address its issues. Scenario-based learning can also be used to accelerate the journey to the pinnacle of safety leadership, where what leaders do and what they say is entirely consistent with their deepest convictions.

References


