Organizational Bystanders

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Knowing that another person is at risk of potential harm but failing to act is called "bystander behavior." We suggest that a form of this behavior occurs when people fail to act when their organizations are at risk. This is important because conscientious people are one of an organization's most important mechanisms for risk management and are often the last line of defense in the face of significant institutional threats. The Columbia space shuttle disaster, a well-documented case, can help leaders in all types of organizations better understand and correct this behavior. Leaders have a crucial role to play in addressing the organizational and psychological underpinnings of passivity in the face of adversity. Actions to mitigate the likelihood of bystander behavior include: (1) creating mechanisms for expressing, and actively encouraging, dissenting points of view; (2) ensuring effective management systems that balance the need for short-term performance with the need for productive inquiry into potential threats; (3) establishing approaches to magnify and follow-up on near-misses and other "weak signals"; (4) managing the impact of monolithic performance goals and budget cuts on the ability of individuals to surface and intervene in risky situations; (5) formulating and practicing contingency plans for disastrous but low probability events; (6) valuing robust, independent watchdogs; and (7) relentless review, self-criticism, and a focus on learning at all levels, especially at the top.

The Columbia Space Shuttle Disaster

Rodney Rocha, responsible for structural engineering at NASA, was worried as he played and replayed the films of Columbia's launch. A large piece of white foam could be seen coming off the Space Shuttle's external tank, striking the left wing of the spacecraft, creating a shower of particles known as a debris field. Foam strikes had plagued shuttle launches from the beginning of the Space Shuttle Program, but no catastrophic damage had been done, although there had been one close call just two flights prior to Columbia. Rocha feared that this strike might be different. No previous foam incident was as extreme as the one he was watching on this launch film. As a careful engineer, Rodney wanted more data to determine what was likely to happen when the shuttle re-entered the earth's atmosphere in just over two weeks.

While in orbit, only a robot camera or a space walk could conclusively determine the extent of the damage to the spacecraft; Columbia had no camera, and sending an astronaut on an unscheduled space walk was not a step to be taken lightly. Nevertheless, Rocha emailed Paul Shack, his boss and a Johnson Space Center

additional imaging help from any outside source. . . . Remember the NASA safety posters everywhere around stating, "If it's not safe, say so"? Yes, it's that serious. (Columbia Accident Investigation Board, 2003)

Despite his frustration, Rocha did not send this email up the chain of command, although he did show it to a colleague on paper. He knew that it was better in the NASA culture to avoid emotionally charged statements. Instead, Rodney decided to work through other channels, using the Debris Assessment Team to analyze what data they did have.

When the Mission Management Team meeting started on Day 8 of Columbia's 16-day flight, there were 12 senior managers sitting at the long black conference table, and more than 20 others around the periphery or on the speakerphone. The meeting started promptly. Don McCormack, manager of the Mission Evaluation Room that supplies engineering support for missions in progress, offered a summary of the Debris Assessment Team's damage scenarios and conclusions based on a briefing he had received from Rocha's team
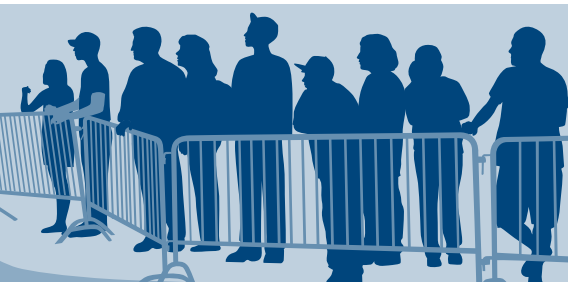
Such individuals often have crucial information or a valuable point of view that would improve an organization's decision making in situations of risk, but for a variety of psychological and organizational reasons they do not intervene.

manager, to request that an astronaut visually inspect the Shuttle's underside. To Rocha's surprise, he never received an answer. He wrote Shack again, also copying David A. Hamilton, Chief of the Shuttle and International Space Station Engineering Office, expressing his team's unanimous desire to use the Department of Defense's high-resolution ground-based cameras to take pictures of Columbia in orbit. Long-range images might not be as good as a physical inspection, but they would be a lot better than what they now had. Using boldface for emphasis, he wrote, "Can we petition (beg), for outside agency assistance?"

Linda Ham, the Mission Management Team Chair responsible for Columbia's mission, was a fast-rising NASA star married to an astronaut. She viewed foam debris as a potential problem, but did not think it constituted a "safety of flight issue." Without compelling evidence that would raise the Debris Team's imagery request to "mandatory" in NASA's jargon, there was no reason, she felt, to ask for outside assistance. Besides, Ham stated in an internal memo, "It's not really a factor during the flight because there isn't much we can do about it." Columbia lacked any on-board means to repair the Shuttle's fragile thermal protection system.

Outraged by being put in a position of having to prove the need for clearly essential diagnostic imagery, and after being told by Shack in a phone call that he personally did not wish to be the "Chicken Little" of NASA by pushing the request higher up the organization, Rocha wrote in an e-mail:

> In my humble technical opinion, this is the wrong (and bordering on irresponsible) answer from the [Space Shuttle Program] and Orbiter not to request

earlier that morning. Even though the team admitted that its analysis was incomplete, McCormack unambiguously concluded during his briefing that there was no risk of structural failure. At worst, he said, the resultant heat damage to some of the tiles would mean delays for subsequent missions while they refitted the tiles that may have been damaged.

During the brief discussion that followed McCormack's summary, one of NASA's most highly regarded tile experts, Calvin Schomburg, concurred that any damage done by the foam strike presented no risk to Columbia's flight. Surprisingly, no one even mentioned the possible damage to the orbiter's wing—into which the flying foam had slammed—focusing instead on the thermal tiles on the spacecraft's underside. Based on previous analysis, RCC—the high-tech material from which the wing's leading edge was made—was considered highly durable, although it might be damaged if hit head-on with enough force. Based on the initial film footage, ambiguous though it was, no one thought this was likely to have happened, so the potential risks of RCC damage were not aggressively pursued.

Impatient to move on, Linda Ham wrapped-up the assessment of the foam strike for those who were having trouble hearing all of the conversation over the speakerphone: "he doesn't believe that there is any burn-through. So no safety of flight kind of issue, it's more of a turnaround issue similar to what we've had on other flights. That's it?" Turning to the senior NASA officials, astronauts, engineers, scientists, and contractors seated around the room, Ham queried: "All right, any questions on that?" No one answered—no one from Mission Management, the Debris Assessment Team, or

Rodney Rocha. The shuttle would land as scheduled.[1]

On February 1, 2003, Columbia broke apart, burning up as it descended at a rate of five miles per second over California, Arizona, New Mexico, and Texas. The gaping hole punched by the foam into the leading edge of the Shuttle's left wing allowed superheated gasses to enter. Temperature sensors went haywire, wiring fused, tires exploded, and, finally, under the intense heat, the wing's structural supports melted. The Shuttle's automated flight controls compensated as best they could, but when the wing lost its structural integrity, the spacecraft went out of control and disintegrated in a fiery meteor shower in the bright blue morning sky.

Arguably, Rocha did what he could to prevent the disaster that befell Columbia, but he lacked the tenacity and organizational savvy to make a difference. Although he initially expressed his concern about possible damage to the orbiter from the insulating foam, he failed to escalate the dangers he foresaw to top management, nor did he speak up during several critical meetings when he had an opportunity to do so. As a result, Rocha became a passive observer, a bystander, to a tragedy that he might have prevented.

When, Where and Why Does Bystander Behavior Occur?

We define an organizational bystander as someone who fails to take necessary action when important threats—or indeed opportunities—arise. Such individuals often have crucial information or a valuable point of view that would improve an organization's decision-making in situations of risk, but for a variety of psychological and organizational reasons they do not intervene. Circumstances ripe for bystander behavior are inherently uncertain, and often involve a potential catastrophe, such as safety lapses (BP's Texas City refinery explosion), product liability issues (Guidant Corporation's intermittently defective defibrillators), or ethical transgressions (Enron's accounting fraud).

Bystander behavior can also surface in other contexts, such as technological or market-driven opportunities requiring substantial investment and timely, decisive action. Spotting these cases is harder because the decision to pass up an opportunity is often too sensitive to discuss outside the organization, and because the consequences of unrealized opportunities may not become evident until years

afterward. In this article, we concentrate primarily on the events leading to disasters.

During critical debates or times of organizational stress, it is common for people to equivocate, fail to challenge erroneous assumptions, or steer clear of confronting bosses they believe to be wrong. Like Rodney Rocha, individuals in these situations may engage in an unspoken analysis of the consequences of behavior at odds with the mainstream point of view within the organization, or with their leaders' preferences. Using a subjective "bystander calculus," they weigh the upside of being right, the downside of being wrong, and the wisdom of simply doing nothing at all. Raising what may later turn out to be a false alarm, or advocating what eventually proves to be a misguided opportunity, often engenders adverse consequences for the individual as well as for the organization.

In an organizational setting, as in the case of Rodney Rocha's boss, members are often concerned about damaging their credibility if they raise a false alarm. "Cry wolf" once too often and you risk being marginalized. Most people prefer to play it safe. (See Exhibit 1 for an overview of people's responses to identified risk.)

Stories We Tell Ourselves

We all find ourselves in situations at one time or another in which we could use the support and help of others. Part of the "social contract" is that we are expected to help others when they are in need, and we expect them to do the same when the tables are turned. An especially strong form of this reciprocity is the cornerstone of elite combat units and of many family relationships, but it has less power in more anonymous settings. Although an organization is dependent on the goodwill of its members—particularly during times of crisis or change—individuals who are seen as "rocking the boat" may not always get the support they need from peers or leaders. This inaction and failure to offer support, on the other hand, conflicts with our self-expectations that we always help those in need, so we look for a way to close the gap. Rationalizations are the stories we tell ourselves to protect our egos from self-criticism, because we do not like to think of ourselves as overly selfish or easily intimidated by casual critiques (Clarkson, 1996). Common organizational bystander rationalizations are described in Exhibit 2.

Rationalizations have the mantra-like quality to shut down organizational debate and quiet those internal arguments we might otherwise have with ourselves. This is their power—and the source of the risks they create by stifling dissent.

Why Do Organizational Members Fail to Act?

Let us now delve more deeply into the psychological and organizational conditions that set the stage for bystander behavior. Our analysis and recommendations seek to provide guidance to:

1. Senior leaders who are responsible for organizational performance; and
2. Senior HR leaders who work with them on issues of organizational design and effectiveness.

Psychological Underpinnings

Research on the bystander phenomenon among strangers, in a subway car, or on the streets, for example, suggests that the characteristics of the situation—particularly the presence of other people and their behavior toward the vulnerable party—strongly affect whether people will take action (Latane & Darley, 1970). These factors are summarized in Exhibit 3, along with relevant illustrations from the Columbia disaster.

EXHIBIT 1		
Reactions to a Potential Threat		
	Real Threat Confirmed	*No Real Threat*
Individual remains passive.	Decreased likelihood of productive organizational outcomes. Individual is a bystander.	No cost. Individual is a savvy professional who does not overreact.
Individual takes action.	Increases likelihood of productive organizational outcome *Individual is a hero (or whistle-blower).*	Cost to individual's reputation, career Costs to the organization to follow-up identified concerns *Individual is an alarmist.*

EXHIBIT 2

Common Organizational Bystander Rationalizations

- "It's not my area of authority. I need to focus on my own group and not offer a view about how others should run their operations."
- "I don't have all the information I need to intervene. The issue is complex and it is better to say nothing."
- "I seem to be the only one seeing this as a problem. Perhaps I am overreacting and should trust the views of others who believe everything is OK."
- "Those making the decisions are experts in the area being debated. They must know more than I do."
- "I'm only following what senior leadership wants. I tried to surface concerns but no one listened."
- "I have little power in this organization. My efforts won't make any difference."
- "I don't want to get caught in a political battle. Better to stay neutral and let others fight it out."
- "We need to move quickly. My contrary point of view will only slow down decision making and be seen as not going along with the team."
- "We should not blame ourselves. We did everything possible—nothing could have been done to avoid the problems."

Beyond these factors, members of highly cohesive groups may unconsciously strive for unanimity—a phenomenon known as "groupthink" (Whyte, 1952; Irving, 1972), intuitively shunning alternative points of view and radical courses of action. In such settings, dissent evaporates before it even forms.

Strong conformity pressures also mean that a person can be objectively right yet still rejected by her group and the larger organization. This is the common fate of whistle-blowers, who are often ostracized or persecuted. Those who protested BP's lax safety standards at the Texas City refinery suffered intense personal pressure, as did the engineers that tried to prevent the Space Shuttle Challenger launch in January 1986.

Together, these factors work to maintain the existing social order. Not "rocking the boat" preserves existing roles, personal relationships, the status of higher-ups, and relationships within and between groups. Keeping the status quo is basic to human nature, yet maintaining organizational stability may come at a tremendous price when dealing with risks.

Organizational Influences

Besides individual- and group-level influences, organizational factors can amplify the tendency toward bystander behavior.

"Command and control" leadership style

Organizations with strong hierarchies and rigid group boundaries tend to be populated with leaders who lack the ability to value, surface, and manage dissent, particularly if it cuts across groups. This was certainly the case in NASA, where the different functional groups with responsibility for the structural damage to the shuttle were not brought together to share information. In general, NASA's environment reinforced the tendency for mid-level staff to defer to

EXHIBIT 3

Psychological Contributors to Bystander Behavior

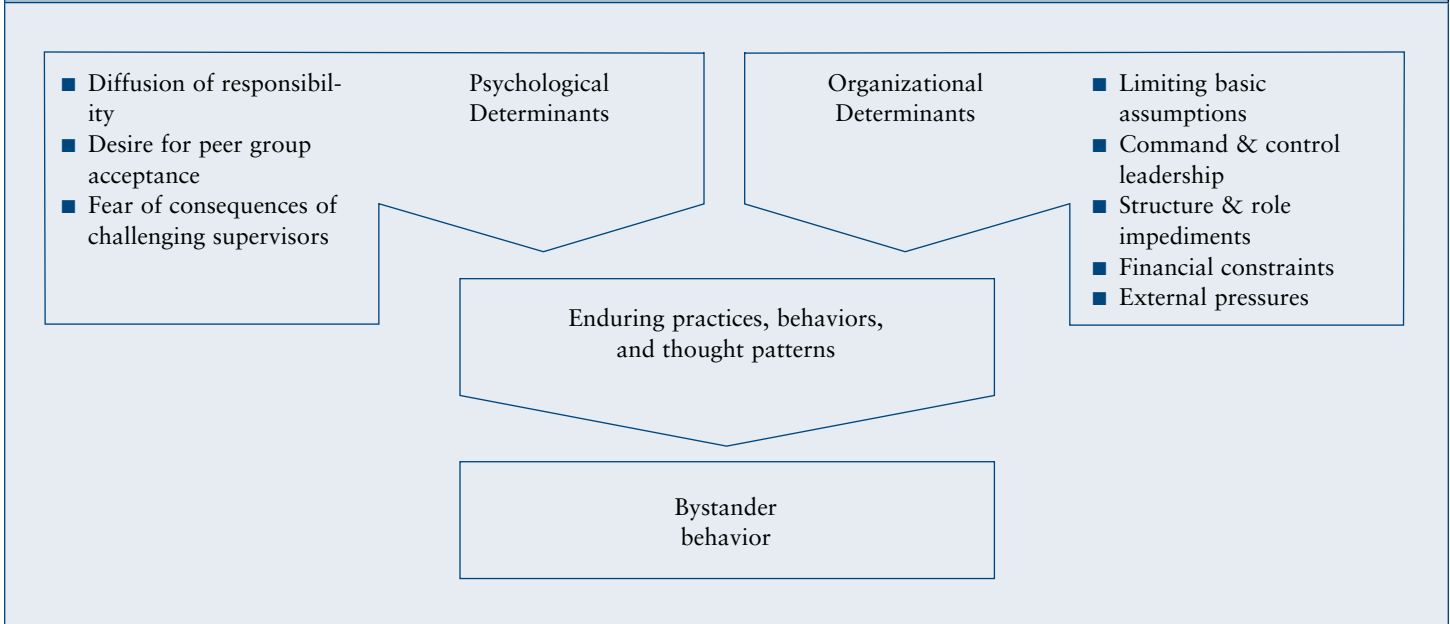| Factor	Description	Columbia Example
Ambiguous precipitating event.	When it is not clear whether one is observing a significant event, the likelihood of observer passivity increases.	Images of foam strike were suggestive but inconclusive. The crew reported no problems in flight.
Large number of people observing the event.	When many people observe an event, there is a diffusion of individual responsibility, and a widespread belief that "somebody" will take action.	Hundreds of people viewed the film of the debris field created by the foam strike.
Failure of others to act.	When other observers are passive, the event is more likely to be interpreted as benign, and therefore not requiring intervention.	Only Rocha and his team seemed concerned about the foam strike. Others who were concerned were located in different groups, and were not in touch with Rocha.
Uncertainty regarding one's ability to help.	In situations that appear to require special skills, unique abilities, or formal authority, the likelihood of observer passivity is increased.	Rocha finally believed he lacked the data and formal power needed to influence NASA's hierarchy.
Presence of formal authorities or "experts."	Observers are not likely to act if "better qualified" authorities or experts are present or nearby.	A host of senior NASA officials reviewed the results of lower level work and believed there was no risk to flight.

senior leadership unless one had compelling data to support a contrary conclusion. At NASA, this so-called "prove it to me" culture inhibited dealing with suspected threats at an early stage. NASA's follow-up to the Space Shuttle Endeavour's foam strike incident in August 2007 represented a marked change in the agency's risk-related problem-solving behavior (Leary, 2007; Chang, 2007).[2]

Structural and role impediments

Dissenting opinions may be muzzled by the organization's structure, incentives, or roles, and by limiting the power of safety and watchdog functions. Dissenting voices are also muted because of financial constraints. Budget cuts, in particular, often undermine risk control before they affect production. In the tragic 1994 shoot-down of US helicopters by Air

EXHIBIT 4

Roots of Bystander Behavior

Psychological Determinants
- Diffusion of responsibility
- Desire for peer group acceptance
- Fear of consequences of challenging supervisors

Organizational Determinants
- Limiting basic assumptions
- Command & control leadership
- Structure & role impediments
- Financial constraints
- External pressures

Enduring practices, behaviors, and thought patterns

Bystander behavior

Force F-15s during Operation Provide Comfort in Iraq—considered the most serious friendly fire incident in the modern US military—the failure of the pilots to recognize a friendly aircraft and of AWACS personnel to intervene were both directly linked to budget cut-backs for training, liaison personnel, and equipment (Snooks, 2000; Gerstein & Ellsberg, 2008).

Failure to challenge core cultural assumptions

Cultural assumptions are the deeply held tenets that an organization's members believe to be true, often without realizing it. In times past, IBM and Xerox's failure to seize the market's demand for new devices came in part from such cultural assumptions—unquestioned financial hurdle rates, a fundamental misunderstanding of marketplace changes, and sales force attachment to historical selling practices and commission structures (Gerstner, 2002; Kearns & Nadler, 1992; Smith & Alexander, 1988). In such cases, organization members who do "think the unthinkable" often find themselves having to establish the very legitimacy of their argument in addition to proving the facts.

Pressure from the external environment

Broader economic and political forces tend to magnify these factors, thus increasing the risk of bystander behavior. Sean O'Keefe, the NASA administrator during the Columbia period, established the tenet that completing Node 2 of the International Space Station was an immutable organizational objective. Although O'Keefe's goal provided a clear organizational focus, it engendered a "production mentality" among the Shuttle Program's senior leaders and the discounting of safety concerns. NASA did not deliberately sacrifice safety; rather, what some called "launch fever" slowly eroded the organization's safety consciousness as production concerns dominated (Starbuck & Farjoun, 2005; Vaughan, 1996). Exhibit 4 summarizes these relationships.

Points of Intervention

In the Columbia disaster, we may be inclined to condemn Linda Ham for shutting down debate instead of vigorously inviting it. We might also be tempted to judge Rodney Rocha guilty of sitting on the sidelines when he should have been in center court. We must, however, resist the temptation to hold individuals to account while understating the role of broader cultural and situational factors, a mistake known as the fundamental attribution error. Although a few people's actions—or in some cases, inaction—were directly linked to the Columbia tragedy, most people in NASA at the time would have behaved in a similar manner to Ham and Rocha, as a larger set of cultural forces were guiding behavior at the Agency.[3]

Just as NASA espoused safety while undercutting it, profound inconsistencies exist within most organizational cultures (Schein, 1996, 2004). Unraveling these inconsistencies—such as Rodney Rocha's reluctance to speak up despite his intense concerns—is essential to understanding otherwise inexplicable behavior. Such a diagnosis also forms the foundation for intervention. Some of the potentially most important imperatives for executive action, as well as some important implications for HR, are summarized here.

Create Mechanisms for Expressing, and Actively Encouraging, Dissent

Despite likely leadership protests to the contrary, it can be surprisingly difficult in many environments for contrary views to surface. This is often because of the power of the hierarchy or the repression by a dominant group of dissenting views. Perhaps the most serious lapse in openness occurs when high-level policy decisions are the source of the problem, and thus a natural focus for criticism. Without creating conditions that facilitate the expression of contrary views and providing adequate protections for truth-tellers, widespread bystander behavior is inevitable.

Ensure Effective Management Systems that Balance Short-Term Goals with the Need for Productive Inquiry into Potential Threats

It is a management cliché that most organizations are dominated by short-term considerations and a focus on efficiency. Unfortunately, as evidenced by the Space Shuttle Challenger disaster, Chernobyl, and Katrina, as well as many other cases, the desire to meet immediate performance goals often elevates risk. At Merck, it is arguable that the desire to perpetuate Vioxx's spectacular success delayed taking actions that initially cost shareholders $30 billion in market capitalization, nearly a decade of growth. In addition, according to critics, Merck's delays may have contributed to thousands of needless deaths and cardiac events.[4] Many firms have embraced the goal of market-level innovation, despite its low likelihood in practice, yet they pay far less attention to surfacing and avoiding low probability setbacks.

Require Follow-Up to "Weak Signals"

The burden to prove the presence of serious risk to Columbia from foam damage fell to Rocha and the other engineers of the Debris Assessment Team. The same burdens plagued Challenger's O-ring engineers and the safety advocates at Texas City. In contrast,

Formulate and Practice Contingency Plans for Disastrous but Low Probability Risks

As the Katrina disaster revealed, plans for dealing with large-scale catastrophes are often overtaken by events. Consequently, it is essential to avoid doing all one's thinking when disaster actually strikes. A sensitivity to weak signals, the willingness to devote significant resources to "unlikely" events, and extensive real-world preparation can be essential to reduce adverse consequences when things really do go wrong. Just weeks before the "7/7" bombings, London's emergency services had staged a full-dress "on the streets" rehearsal. If not for this practice, it seems likely that their widely praised response would not have been nearly as fast or effective. These expensive advance planning and training exercises are critical investments in the human system's capability to recognize and respond to a crisis (7 July Review Committee, 2007).

Value Robust, Independent Watchdogs

Actions that make corporate and external watchdogs more "client-centered" and "efficient" run serious risks of reducing their effectiveness. As evidenced by cases such as Enron, Chernobyl, Columbia, and Vioxx, the critical question we must ask is: Which is more important, watchdog efficiency or avoiding low-probability
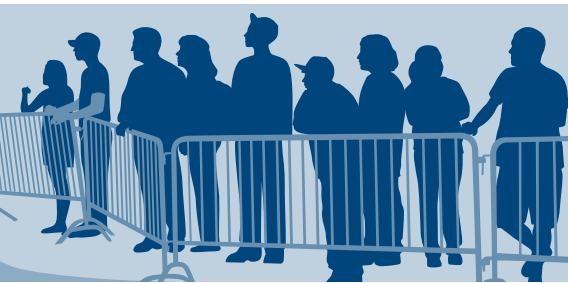
> Many firms have embraced the goal of market-level innovation, despite its low likelihood in practice, yet they pay far less attention to surfacing and avoiding low probability setbacks.

a fundamental tenet of high reliability process safety is that serious risk be assumed at the first signs of danger. "Weak signals"—minor mishaps or near-misses that often precede a full-scale disaster—are key warning signs that must be diagnosed, not glossed over or ignored. Furthermore, the inevitable costs of periodic "Chicken Little events" must be written off as costs on the road of continuous improvement.

Manage the Dangers of Monolithic Performance Goals and Budget Cuts

Accidents such as Chernobyl, Challenger, and Texas City (and arguably Enron's accounting manipulations) reveal that imposing nonnegotiable performance objectives combined with severe sanctions for failure encourages the violation of rules, reporting distortions, and dangerous, sometimes illegal short-cuts. They also increase the likelihood of putting people in no-win situations, in which accomplishing objectives promotes recklessness or even fraud, inevitably increasing the chances of a nasty surprise (Cameron & Mishra, 1981; Cameron, et al., 1993). Studies suggest that methods that consider systemic implications and build employee trust are far more effective in implementing demanding organizational changes (Day & Schoemaker, 2005).

disasters? Watchdogs are not consultants, they are a form of insurance whose benefits may not appear directly in the current short-term P&L. Reinforcing the independence of financial auditors was a move in the right direction after the Enron scandal. An analogous recommendation regarding the importance of process safety capabilities and personnel was made by the Baker Panel in the wake of the BP Texas City explosion, and the FDA has come under criticism for being too cozy with the pharmaceutical companies it regulates. Under financial pressure, watchdog departments such as safety, regulatory compliance, and auditing make an easy target for counter-productive cost-cutting and efficiency-oriented redesign.

Relentless Review, Self-Criticism, and a Focus on Learning

One of the most difficult challenges for any organization is to learn from experience without defensiveness or denial. In national security matters, Daniel Ellsberg, famous for his 1971 release of the government report known as the "Pentagon Papers" to *The New York Times* and *The Washington Post*, calls this the "anti-learning mechanism." According to Ellsberg (Gerstein & Ellsberg, 2008, ch. 6):

> The point is not to avoid improving performance; it's that the risks incurred by studying present and past faulty decision-making risks inviting blame and

organizational, political, perhaps legal penalties, out-weigh in the minds of many officials the benefits of having a clear understanding of what needs to be changed within the organization.

The US Army and many private companies employ the discipline of the "after action review," a process that extracts lessons learned from both successes and failures at every rank (Gerstein, 1997). In contrast to ordinary post-mortems that tend to concentrate on failures, as well as more casual retrospective reviews that often tread softly on the contributory role of those at the top, after action reviews endeavor to spare no one from scrutiny—although the power of senior people to cover up mistakes remains strong in most organizations.[5] Proponents of these reviews believe that the robustness of the process combined with critiques at all levels vastly improves organizational learning.

The HR Leader: An Ear to the Ground and A Voice at the Top

Effective HR leaders have a uniquely keen sense of their organizations. In many cases, they have the broadest and most integrated perspective of how an organization operates, as well as informal networks that provide reliable sources of intelligence. This puts the HR leader in a unique position to act in his or her formal executive role to make needed changes and as a back-channel to surface concerns that are not being addressed through official means. Fast-tracking such concerns to the top of the organization is often key to averting disaster or seizing opportunities.

Even with timely information, encouraging open inquiry and well-intentioned dissent is a problem requiring both effective organizational design and proper management. Structures, processes, and measures facilitate information sharing about risks, whereas people's day-to-day behavior is inevitably affected by a complex set of formal and informal organizational factors. HR plays a key role in all these areas.

In particular, HR leaders must identify and surface any vital differences between what is espoused and what is really going on within their organizations. Just as in the Challenger accident 17 years before, one of the failures during the Columbia disaster was the lack of mechanisms that might have surfaced the suppression of the true concerns of the most knowledgeable engineers. It also seems likely that many at NASA, particularly in HR, knew that performance pressure and politics had been eroding safety concerns for some time.

Although contextual factors, including an organization's culture, tend to "over determine" individual behavior, HR must also focus on staffing the organization's key leadership positions with people who are willing to take a contrary stance, despite short-term pressures to go along with those in power or the dominant views. Organizations need people with insight into when it is necessary to push back, and with the courage and the skills to do so effectively. Staffing key positions with people with the right mix of personality characteristics and political skills can make a decisive difference in the management of risk. In the Columbia case, it is easy to see how the difference in the capabilities of one or two people might well have averted the tragedy.

Conclusion: Beyond Bystander Behavior

Reducing bystander behavior is but one mechanism for managing risks, be they either threats or missed opportunities. Unfortunately, bystander behavior is not something that can be "fixed" once

and for all, as it is a natural outgrowth of the interplay of human psychology and organizational forces. The best we can hope for is to manage it well, and, by so doing, help to prevent catastrophic outcomes.

Greater truth-telling and risk investigation inevitably generate expense, some of which will be deemed unnecessary. In the Space Shuttle Endeavour incident in August 2007, reaching the conclusion that there was no "safety of flight issue" required extensive study—both in space and on the ground—that involved over 100 people in a sometimes contentious cross-functional inquiry. The identical conclusion was obviously wrong in the case of Columbia, which is the point: There is no way to know the true risks without performing a thorough, often expensive investigation. As a result, reacting to suspected organizational threats is particularly challenging for overburdened managers, such as those at BP's Texas City refinery, who often struggle with intense production demands, short-staffed teams, limited budgets, and unforgiving bosses.

Similar to many matters related to organizational culture, it is ultimately leadership's job to set the tone for dealing with risk-related decisions and ensure that adequate investigative resources are available when they are needed. In the specific case of preventing bystander behavior, the psychological and organizational forces are far too powerful to expect real change without a concerted leadership effort. In this respect, NASA's top management failed during the Columbia incident. Although they appear to have finally learned their lesson during Endeavour, the loss of two Shuttles, their crews, and US prestige around the world suggests that the tuition cost was extraordinarily high (Chang, 2007).

We believe that HR leaders need to reinforce their senior management's capacity for managing risk, including the surfacing of dissent in the decision making process. Although we have seen senior executives argue that the solution to bystander behavior is "just" a matter of people's having the guts to speak up when they are concerned about something, it should be clear that this is a self-justifying but ultimately unrealistic point of view. HR can and must help line executives confront such distorted thinking when it arises.

Implementing these ideas is not easy, and not without some personal risk for those making the effort. Historical, organizational, cultural, and psychological factors all conspire to encourage rather than inhibit risk-taking in general and bystander behavior in particular. By helping to reshape an organization's design, encouraging productive dissent and confronting dangerous leadership rationalizations, HR can make a vital difference. Perhaps most important, effective HR leaders set a courageous example by not being bystanders themselves.

NOTES

1. See the detailed notes from the Mission Management Team Minutes, Jan. 24, 2003 (*http://www.nasa.gov/columbia/foia/index.html,* 07/22/03—Mission Management Team Transcripts). In reviewing these documents, one quickly realizes how many issues were being addressed by the team. The foam strike was only one of many demands on the group's time.
2. Endeavor's foam-related problem was eventually traced to minute cracks in the underlying high density foam that forms a foundation for the lighter foam that broke off the Shuttle's external fuel tank support and damaged two of the orbiter's thermal protection tiles. See Leary, 2007. For a discussion of the changes at NASA, see Chang, 2007.

3. Chris Argyris has written extensively on the inconsistencies between an organization's espoused values and the behavior of its members (see Argyris & Schön, 1974).
4. The initial fall of Merck & Company's stock price was dramatic, and the company's stock performance growth lagged behind the S&P 500 for 21 months until July 2006, after which it has led the S&P. In terms of numerical stock price, it took Merck 15 months to recover. For a good overview of the Vioxx controversy, see Krumholz, et al., 2007. Also see Gerstein & Ellsberg, ch. 6.
5. The 1994 friendly fire shootdown (see Snook, 2000) precipitated both a GAO and Senate investigation; however, according to Laura Piper (mother of Laura Piper), one of the victims, the then-head of the Air Force, believed that Gen. Merrill McPeak, then chief of staff of the Air Force, was behind not holding the pilots responsible and compromising the Senate investigation.

BIOGRAPHICAL SKETCHES

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