

Decisions, Decisions

By Peter Zimmerman and Jennifer S. Lerner

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Do emotions influence your decision-making? Should they? Do they mislead or convey important information and aid your decision-making? The answer to all these questions is yes.

In January 2003, the space shuttle *Columbia* lifted off from Cape Kennedy with seven astronauts on board. Eighty-one seconds into flight, a piece of foam insulation fell away from the external tank that fueled the main engine. Cameras recorded the foam striking *Columbia* on its left wing.

Foam had struck the spacecraft on prior flights but never caused much damage. Some engineers were alarmed by this latest incident, but senior NASA managers were reluctant to check for damage. To do so, they would have had to track down satellite imagery from other agencies or improvise a space walk. Neither approach was attractive. More troubling, officials seemed unwilling or unable to face the possibility of serious damage. "I don't think there is much we can do about it," said one senior manager.

The damage wasn't detected until *Columbia* re-entered Earth's atmosphere 15 days later. As sensors sent erratic, confusing data, the shuttle lost control, broke apart and plunged to Earth, tragically ending the lives of its crew.

The investigations that followed the disaster cited many failures, from technical problems to flaws in NASA's organization and culture. Investigators identified numerous opportunities in which management decisions could have led to an assessment of the damage.

Decisions based on emotion and assumptions sealed *Columbia's* fate.

Longtime decision-making models assume people base decisions on evidence and rational analysis of alternatives, including attendant risks and uncertainties. But scientific discoveries about the brain undercut that basic assumption.

Research shows the model of rational, self-aware decision-making rarely plays out in the real world. To begin with, most human cognition is unconscious. People absorb millions of bits of data per second through the senses and then compress, screen and process this data automatically through shortcuts in the brain. Neuroscience breakthroughs show the brain's emotional pathways engage more rapidly than cognitive pathways. As a consequence, the emotional centers of the brain influence what people see hear and feel in response to an event or task well before they experience a conscious thought. What emerges in conscious awareness are snap judgments, instant recognition, intuitions and feelings of certainty that can't be fully explained. Though wondrously efficient, these processes generate biases that can result in errors.

Two types of emotion influence decision-making: integral emotions arise from the situation at hand while incidental emotions carry over from past events. Integral emotions are legitimate decision inputs. Your brain is sending you an alert. In the *Columbia* case, the apprehension, alarm, even fear many NASA engineers felt were integral to judgments about safety. No one knew where foam had struck *Columbia* or with what effect, and the engineers wanted to find out. Incidental emotions can be misleading. Top NASA managers harked back to past incidents of foam strikes that caused little damage. They drew false comfort from the past, diverting their attention from situation at hand and the risk to *Columbia* and its crew.

Failure to recognize and act on integral emotions helped seal *Columbia's* fate.

Here are some ways managers can recognize and deal with their emotions when it's decision time.

Diagnose your feelings. A common mistake among experienced executives is to assume the types of decision-making errors seen in the *Columbia* case don't affect them. Yet countless studies conducted in the Harvard Decision Science Laboratory reveal incidental emotions affect everyone, whether or not they're aware of them. Any situation can trigger cognitive and emotional biases that spill over into current experience. Probe whether your emotions are integral or incidental and whether they are appropriate.

Consider other perspectives Consultants, advisers and confidantes can help you identify how your personal history and the situations you encounter are likely to bias your thinking. Education and training also can help. When asked what prepared him for leadership in Iraq as head of U.S. Central Command, Army Gen. David Petraeus cited the diverse perspectives he encountered in civilian graduate school. Looking at problems through the eyes of others can improve your judgment.

Treat each situation as unique. Our minds are hard-wired to assume the past reliably predicts the future. In fact, the neural pathways associated with prediction mirror those associated with memory. This explains why NASA managers felt comfortable with their decision based on incidents that turned out fine. If they instead had categorized earlier foam losses as

near misses worthy of investigation, rather than as successes, catastrophe might have been averted.

Emotions can lead you astray, but they are time-tested evolutionary adaptations to universal life challenges. Rather than writing off your fears, investigate them fully and carefully weigh their role in your decisions.

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