

The Art of Critical Decision Making

Professor Michael A. Roberto



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of Critical Decision Making
Part II**

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Michael A. Roberto is the Trustee Professor of Management at Bryant University in Smithfield, Rhode Island, where he teaches leadership, managerial decision making, and business strategy. He joined the tenured faculty at Bryant after serving for six years on the faculty at Harvard Business School. He also has been a Visiting Associate Professor at New York University's Stern School of Business.

Professor Roberto's new book, *Know What You Don't Know: How Great Leaders Prevent Problems before They Happen*, was published by Wharton School Publishing in 2009. It examines how leaders discover hidden problems and unearth bad news in their organizations before such problems escalate to become major failures. His 2005 book, *Why Great Leaders Don't Take Yes for an Answer*, was named one of the top-10 business books of that year by *The Globe and Mail*, Canada's largest daily newspaper. The book examines how leaders can cultivate constructive debate to make better decisions.

Professor Roberto's research focuses on strategic decision-making processes and senior management teams. He also has studied why catastrophic group or organizational failures happen, such as the *Columbia* space shuttle accident and the 1996 Mount Everest tragedy. He has published articles based on his research in *Harvard Business Review*, *California Management Review*, *MIT Sloan Management Review*, *The Leadership Quarterly*, and *Group and Organization Management*.

Professor Roberto's research and teaching have earned several major awards. His 2004 article, "Strategic Decision-Making Processes: Beyond the Efficiency-Consensus Tradeoff," was selected by Emerald Management Reviews as one of the top-50 management articles of 2004 from among 20,000 articles reviewed by that organization that year. His multimedia case study about the 2003 space shuttle accident, titled "Columbia's Final Mission," earned the software industry's prestigious Codie Award in 2006 for Best Postsecondary Education Instructional/Curriculum Solution. Finally, an article based on his research earned him the Robert Litschert Best Doctoral Student Paper Award in the year 2000 in the Academy of Management's Business Policy Division. On the teaching front, Professor Roberto earned the Outstanding MBA Teaching Award at Bryant University in 2008. He also has won Harvard's Allyn A. Young Prize for Teaching in Economics on two occasions.

Professor Roberto has taught in the leadership-development programs of and consulted at a number of firms including Apple, Morgan Stanley, Coca-Cola, Target, Mars, Wal-Mart, Novartis, The Home Depot, Federal Express, Johnson & Johnson, Bank of New York Mellon, and Edwards Life Sciences. He also has presented at government organizations including the FBI, NASA, and the EPA. Over the past five years, Professor Roberto has served on the faculty at the Nomura School of Advanced Management in Tokyo, where he teaches in an executive education program each summer.

Professor Roberto received an A.B. with Honors from Harvard College in 1991. He earned an M.B.A. with High Distinction from Harvard Business School in 1995, graduating as a George F. Baker Scholar. He also received his D.B.A. from the Harvard Business School in 2000.

In the past, Professor Roberto worked as a financial analyst at General Dynamics, where he evaluated the firm's performance on nuclear submarine programs. He also worked as a project manager at Staples, where he played a role in the firm's acquisition integration efforts.

In his spare time, Professor Roberto enjoys gardening, running, hiking, and cooking. He lives in Holliston, Massachusetts, with his wife, Kristin, and his three children, Grace, Celia, and Luke.

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The Art of Critical Decision Making

Scope:

Why did that leader make such a horrible decision? We have all asked that question when we have observed a poor decision, whether it be in politics, business, athletics, or the nonprofit sector. Too often, observers attribute such flawed choices to incompetence, inexperience, a lack of intelligence, or bad intentions. In most cases, though, the faulty decisions do not arise because of these factors.

In this course, we examine why leaders and organizations make poor choices, digging deep into cognitive psychology, group dynamics, and theories of organizational culture and systems to help us understand why well-intentioned, capable people blunder. Moreover, we examine the techniques and behaviors that leaders can employ to improve decision making in their organization. We focus on how leaders can design decision-making processes that marshal the collective intellect in their organizations, bringing together the diverse expertise, perspectives, and talents to determine the best course of action.

The course uses case studies to examine decision making at three levels: individual, group, and organizational. To begin, we examine how individuals make choices. We show that most individuals do not examine every possible alternative or collect mountains of information and data when making choices. Instead, most of us draw on our experience, apply rules of thumb, and use other heuristics when making decisions. Sometimes, that leads us into trouble. As it turns out, most individuals are susceptible to what psychologists call cognitive biases—decision traps that cause us to make certain systematic mistakes when making choices. From there, we examine the intuitive process in great depth, showing that intuition is more than a gut instinct. Intuition represents a powerful pattern-recognition capability that individuals have, drawing from their wealth of past experience. However, intuition can lead us astray, and this course explains how and why that can happen, particularly when we reason by analogy.

In the second major module of the course, we examine how teams make decisions, recognizing that most of us do not make all our choices on our own. Instead, we often work in groups to make complex choices. We begin by asking the question, are groups “smarter” than individuals? We see that they can be, but in many cases, teams do not actually employ the diverse talents and knowledge of the members effectively. Thus, teams may experience a lack of synergy among the members. We show the problems that typically arise, such as groupthink—that is, the tendency for groups to experience powerful pressures for conformity, which suppress dissenting views and lead to clouded judgments. In our section on group decision making, we also examine why teams often find themselves riddled with indecision. Most importantly, though, we examine how groups can stimulate constructive conflict, as well as achieve consensus and timely closure, so that they can overcome these problems and make better decisions.

Finally, we examine decision making at the organizational level of analysis. Here, we look at a number of large-scale failures such as the *Columbia* space shuttle accident and the Three Mile Island nuclear power plant incident. We show that one cannot attribute such failures to one faulty decision, nor to one poor leader. Instead, we must understand how the structure, systems, and culture of the organization shape the behavior of many individuals and teams. In these cases, we often see large-scale failures resulting from multiple small decision failures that form a chain of events leading to a catastrophe. We also look in this final module at how some organizations have discovered ways to encourage vigilant decision making in the face of high risks, such that they perform with remarkable reliability.

The course concludes with a lecture on how leaders must behave differently to improve decision making in their organizations. Specifically, leaders have to dispel the notion that they must come up with all the answers or solutions to tough problems. Instead, they must view their responsibility as designing the decision-making processes that help individuals come together to make better choices. Leaders have to create productive dialogues in their organizations, and to do so, they have to understand the pitfalls that are described in this course, as well as the techniques that can be used to enhance decision-making effectiveness.

Before applying these lessons, leaders must first learn to identify the true problems facing their organizations. By honing their skills as problem finders, leaders at all levels can preempt threats before they balloon into disasters.

Lecture One

Making High-Stakes Decisions

Scope: Why did President John F. Kennedy choose to support an invasion of the Bay of Pigs by Cuban exiles in 1961? Why did NASA choose to launch the *Challenger* in 1986 despite engineers' concerns about O-ring failure? In each of these cases, leaders—and the organizations in which they worked—made flawed decisions that led to very poor outcomes. When we think about these types of blunders, we carry with us certain myths about how leaders make decisions. We jump too quickly to the conclusion that the leadership must have had poor intentions or lacked the competence to make the right call. This lecture seeks to identify and dispel those myths about leadership and decision making. It explains how decisions actually get made in most organizations, as well as why they tend to go off track. We make the argument that failings at the individual, group, and organizational levels tend to contribute to poor decision making.

Outline

- I. Decision making is one of the most essential skills that a leader must possess. In this course, we will look at how leaders can improve their ability to make high-stakes decisions in organizations.
 - A. We have all witnessed or read about spectacular decision-making blunders.
 1. Why did John F. Kennedy decide to support the Bay of Pigs invasion by a group of Cuban exiles intent on overthrowing communist dictator Fidel Castro?
 2. Why did NASA decide to launch the *Challenger* space shuttle in 1986 despite engineers' concerns about possible O-ring erosion due to the cold temperatures expected on the morning of the launch?
 3. Why did Coca-Cola CEO Roberto Goizueta decide to introduce New Coke in 1985, changing the vaunted formula on the company's flagship drink?
 - B. When we observe such highly flawed decision making, we often ask ourselves, how could they have been so stupid?
 1. We often attribute others' decision-making failures to a lack of intelligence or relevant expertise, or even to personality flaws of the individuals involved. We might even question their motives.
 2. We think of our own decision-making failures in a different way. We tend to blame an unforeseeable change in external factors; we don't attribute it to factors within ourselves such as intelligence, personality, or expertise. Psychologists describe this dichotomy as the fundamental attribution error.
 3. Perhaps we think of others' failures as the blunders of unintelligent or incapable individuals because we want to convince ourselves that we can succeed at a similar endeavor despite the obvious risks.
 4. In most cases, differences in intellectual capability simply do not help us differentiate success from failure when it comes to complex, high-stakes decisions.
 5. As it turns out, most leaders stumble when it comes to the social, emotional, and political dynamics of decision making. They also make mistakes because of certain cognitive traps that affect all of us, regardless of our intellect or expertise in a particular field.
- II. We maintain a belief in a number of myths about how decisions are made in groups and organizations. By clearly understanding how decisions are actually made in organizations, we can begin to learn how to improve our decision-making capabilities.
 - A. Myth #1: The chief executive decides.
 1. Reality: Strategic decision making entails simultaneous activity by people at multiple levels of the organization.
 2. We can't look only to the chief executive to understand why a company or nonprofit organization or school embarked on a particular course of action.
 - B. Myth #2: Decisions are made in the room.
 1. Reality: Much of the real work occurs "off-line," in one-on-one conversations or small subgroups, not around a conference table.
 2. The purpose of formal staff meetings is often simply to ratify decisions that have already been made.
 - C. Myth #3: Decisions are largely intellectual exercises.
 1. Reality: High-stakes decisions are complex social, emotional, and political processes.
 2. Social pressures for conformity and human beings' natural desire for belonging affect and distort our decision making.
 3. Emotions can either motivate us or at times paralyze us when we make important decisions.
 4. Political behaviors such as coalition building, lobbying, and bargaining play an important role in organizational decision making.

- D. Myth #4: Managers analyze and then decide.
 1. Reality: Strategic decisions unfold in a nonlinear fashion, with solutions frequently arising before managers define problems or analyze alternatives.
 2. Decision-making processes rarely flow in a linear sequence, as many classic stage models suggest.
 3. Sometimes, solutions go in search of problems to solve.
 4. In my research, I found a number of managers who chose a course of action and then engaged their team to conduct analysis of various alternatives. They do so for a number of reasons.
 5. Consider the case of Lee Iacocca and the Ford Mustang. Iacocca conducted a great deal of analysis as a tool of persuasion, not of decision making.
 - E. Myth #5: Managers decide and then act.
 1. Reality: Strategic decisions often evolve over time and proceed through an iterative process of choice and action.
 2. We often take some actions, make sense of those actions, and then make some decisions about how we want to move forward.
- III. To understand how decisions occur, and what can go wrong when we make critical choices, we have to understand decision making at three levels of analysis: individual, group, and organizational.
- A. At the individual level, we have to understand how the mind works. Sometimes, our mind plays tricks on us. Sometimes, we make biased judgments. On other occasions, our intuition proves quite accurate.
 1. We make poor decisions because of cognitive biases such as overconfidence and the sunk-cost effect.
 2. Our intuition can be very powerful, but at times, we make mistakes as we match what we are seeing to patterns from our past.
 - B. At the group level, we have to understand why teams do not always make better decisions than individuals.
 1. Groups hold great promise, because we can pool the intellect, expertise, and perspectives of many people. That diversity holds the potential to enable better decisions than any particular individual could make.
 2. Unfortunately, many groups do not realize that potential. They fail to realize the synergy among their members. In fact, they make decisions that are inferior to those that the best individual within the group could make on his or her own.
 3. To understand group decision-making failures, we have to examine problems that groups encounter such as social pressures for conformity.
 - C. At the organizational level, we have to understand how structure, systems, and culture shape the decisions that we make.
 1. We do not make our decisions in a vacuum. Our environment shapes how we think, how we interact with those around us, and how we make judgments.
 2. Organizational forces can distort the information that we receive, the interpretations of those data, and the way that communication takes place (or does not take place) among people with relevant expertise.
- IV. Many leaders fail because they think of decisions as events, not processes.
- A. We think of the decision maker sitting alone at a moment in time, pondering what choice to make.
 1. However, most decisions involve a series of events and interactions that unfold over time.
 2. Decisions involve processes that take place inside the minds of individuals, within groups, and across units of complex organizations.
 - B. Many leaders focus on finding the right solutions to problems rather than thinking carefully about what process they should employ to make key decisions.
 1. When confronted with a tough issue, we focus on the question, what decision should I make?
 2. We should first ask, how I should I go about making this decision?
 - C. The purpose of this course is to help us understand how to diagnose our processes of decision making, as well as how to enhance those processes moving forward.
- V. As we go through this course, we will draw heavily on the case method.
- A. A case simply involves a thick, rich description of a series of actual events.
 - B. In many lectures, we will dive right into a case study to begin our discussion of a particular topic. From that case, we will induce a number of key concepts and frameworks.
 - C. We also will work deductively at times, starting with theory and then using case studies to illustrate important theories of decision making so as to bring those theories to life.
 - D. Over time, we will learn by comparing and contrasting case studies as well.

- E. Research shows that people learn key ideas more effectively when they can attach those concepts to real-world examples.
- F. We hope that the cases will make an indelible imprint, so that you remember the concepts and ideas that we discuss, and so that you will have a deeper understanding of them.

Suggested Reading:

Harrison, *The Managerial Decision-Making Process*.

Roberto, *Why Great Leaders Don't Take Yes for an Answer*.

Questions to Consider:

1. Why do we often hold a distorted view of how decisions actually take place in organizations?
2. Why do we often focus more on the content of a decision than on the process of decision making?
3. What is the value of learning by the case method?

Lecture Two

Cognitive Biases

Scope: Drawing on the case study of Mount Everest, we explain how human beings tend to make certain types of classic mistakes when we make decisions. We call these mistakes cognitive biases. These biases tend to affect both novices and experts across a wide range of fields. The biases exist because we are not perfectly rational human beings, in the sense of an economist's rational choice model of decision making. Instead, we are fundamentally bounded in our rationality; that is, we do not examine every possible option or every scrap of data before we make a decision. We adopt certain rules of thumb and take other shortcuts when we make choices. By and large, those shortcuts help us make choices in an economical manner, so that we do not get bogged down every time we need to make a decision. However, in some cases, our cognitive limitations lead to poor decisions. In this lecture, the Mount Everest case study illustrates biases such as the sunk-cost effect, overconfidence bias, and recency effect.

Outline

- I. One of the most powerful examples of flawed decision making is the 1996 Mount Everest tragedy.
 - A. The tragedy occurred when 2 expedition teams got caught in a storm, high on the mountain, on May 10–11, 1996. Both expedition team leaders, as well as 3 team members, died during the storm.
 1. The 2 teams were commercial expeditions, meaning that individuals were clients paying to be guided to the top by a professional mountaineer.
 2. Scott Fischer led the Mountain Madness team. Rob Hall led the Adventure Consultants expedition.
 - B. Climbing Mount Everest is an incredibly arduous exercise.
 1. It takes roughly 2 months to climb Everest, because you must spend at least 6 weeks preparing your body for the final push to the summit.
 2. During those 6 weeks, you go through an acclimatization routine to allow your body to adjust to the low levels of oxygen at high altitude.
 3. During that time, you establish a series of camps along the path to the summit, starting with Base Camp, which is at about 17,000 feet. The summit is at over 29,000 feet (well over 8000 meters).
 4. The final push to the summit entails an 18-hour round trip from Camp IV to the summit. You leave late at night and climb through the dark to the summit, reaching it around midday if all goes well. Then you climb down quickly so that you can reach Camp IV again before it gets dark.
 5. Supplemental oxygen is critical for most climbers. Even with it, the climbing can be very difficult. As mountaineer David Breashears has said, it can be like “running on a treadmill while breathing through a straw.”
 - C. The 2 expedition teams that encountered trouble on May 10, 1996, violated some of their own rules for climbing.
 1. The expedition leaders talked extensively about the need for a turnaround-time rule. The principle was that, if you could not reach the top by one or two o'clock in the afternoon, then you should turn around. The reason is that you do not want to be climbing down in the darkness.
 2. On May 10–11, 1996, many of the expedition team members did not reach the summit until late in the afternoon. Some arrived at or after four o'clock. Jon Krakauer, one of the climbers, who wrote a bestselling book about the incident, has written that “turnaround times were egregiously ignored.”
 3. As a result, they were climbing high on the mountain at a far later hour than they should have been.
 4. When the storm hit, they found themselves not only trying to climb down in darkness, but also during a raging blizzard.
 5. Five people could not get back to Camp IV, and they died high on the mountain.
- II. The Mount Everest case illustrates a number of cognitive biases that impaired the climbers' decision making.
 - A. We are not perfectly rational actors.
 1. Economists depict individuals as rational decision makers. By that, they mean that individuals collect lots of information, examine a wide variety of alternatives, and then make decisions that maximize our personal satisfaction.
 2. However, we do not make decisions in a manner consistent with economic models. Nobel Prize-winner Herbert Simon has argued that humans are boundedly rational. We are cognitively limited, such that we can't possibly be as comprehensive in our information gathering and analysis as economists assume.
 3. Herbert Simon and James March have argued that humans satisfice, rather than optimize in the way that economic theory presumes. By satisficing, they mean that we search for alternatives only to the point where we find an acceptable solution. We do not keep looking for the perfectly optimal solution.
 4. In many situations, we take shortcuts. We employ heuristics and rules of thumb to make decisions.

5. Most of the time, our shortcuts serve us well. They save us a great deal of time, and we still arrive at a good decision.
- B.** Sometimes, though, we make mistakes. Our cognitive limitations lead to errors in judgment, not because of a lack of intelligence, but simply because we are human.
1. Psychologists describe these systematic mistakes as cognitive biases. Think of these as decision-making traps that we fall into over and over.
 2. These biases affect experts as well as novices.
 3. They have been shown to affect people in a wide variety of fields. Psychologists have demonstrated the existence of these biases in experimental settings as well as in field research.
- III.** The first cognitive bias evident in the Everest case is the overconfidence bias.
- A.** Psychologists have shown that human beings are systematically overconfident in our judgments.
 - B.** For instance, research shows that physicians are overly optimistic in their diagnoses, even if they have a great deal of experience.
 - C.** In the Everest case, the expedition leaders clearly displayed evidence of overconfidence bias.
 - D.** Scott Fischer once said, “We’ve got the Big E completely figured out, we’ve got it totally wired. These days, I’m telling you, we’ve built a yellow brick road to the summit.”
 - E.** When one climber worried about the team’s ability to reach the summit, Rob Hall said, “It’s worked 39 times so far, pal, and a few of the blokes who summited with me were nearly as pathetic as you.”
 - F.** Many of the climbers had arrived at very positive self-assessments. Krakauer described them as “clinically delusional.”
- IV.** The second cognitive bias is the sunk-cost effect.
- A.** The sunk-cost effect refers to the tendency for people to escalate commitment to a course of action in which they have made substantial prior investments of time, money, or other resources.
 1. If people behaved rationally, they would make choices based on the marginal costs and benefits of their actions. They would ignore sunk costs.
 2. In the face of high sunk costs, people become overly committed to certain activities even if the results are quite poor. They “throw good money after bad,” and the situation continues to escalate.
 3. Barry Staw was one of the first researchers to demonstrate the sunk-cost effect in an experimental study.
 4. Then in 1995, Staw and his colleague Ha Hoang studied the issue in a real-world setting. Their study demonstrated evidence of the sunk-cost effect in the way that management and coaches made decisions in the National Basketball Association.
 - B.** In the Everest case, the climbers did not want to “waste” the time, money, and other resources that they had spent over many months to prepare for the final summit push.
 1. They had spent \$65,000 plus many months of training and preparing. The sunk costs were substantial.
 2. Thus, they violated the turnaround-time rule, and they kept climbing even in the face of evidence that things could turn out quite badly. Some have described it as “summit fever,” when you are so close to the top and just can’t turn back.
 3. At one point, climber Doug Hansen said, “I’ve put too much of myself into this mountain to quit now, without giving it everything I’ve got.”
 4. Guide Guy Cotter has said, “It’s very difficult to turn someone around high on the mountain. If a client sees that the summit is close and they’re dead set on getting there, they’re going to laugh in your face and keep going.”
- V.** The third cognitive bias evident in the Everest case is the recency effect.
- A.** The recency effect is actually one particular form of what is called the availability bias.
 1. The availability bias is when we tend to place too much emphasis on the information and evidence that is most readily available to us when we are making a decision.
 2. The recency effect is when we place too much emphasis on recent events, which of course are quite salient to us.
 3. In one study of decision making by chemical engineers, scholars showed how they misdiagnosed product failures because they tended to focus too heavily on causes that they had experienced recently.
 - B.** In the case of Everest, climbers were fooled because the weather had been quite good in recent years on the mountain.
 1. Therefore, climbers underestimated the probability of a bad storm.
 2. David Breashears said, “Several seasons of good weather have led people to think of Everest as benevolent, but in the mid-eighties—before many of the guides had been on Everest—there were three consecutive seasons when no one climbed the mountain because of the ferocious wind.”

3. He also said, “Season after season, Rob had brilliant weather on summit day. He’d never been caught in a storm high on the mountain.”
4. We all can get fooled by recent hot streaks. We begin to get caught up in a streak of success and underestimate the probability of failure. If we looked back over the entire history of a particular matter, we would raise our probability of failure.

C. In the lecture that follows, we will examine a number of other biases that affect decision makers.

Suggested Reading:

Krakauer, *Into Thin Air*.

Russo and Schoemaker, *Winning Decisions*.

Questions to Consider:

1. What are the costs and benefits of satisficing (relative to the optimization process depicted by economists)?
2. Why do humans find it so difficult to ignore sunk costs?
3. What are some examples of “summit fever”-type behavior in other fields?

Lecture Three

Avoiding Decision-Making Traps

Scope: This lecture continues our discussion of cognitive biases. Drawing on a number of examples ranging from the National Basketball Association to the Pearl Harbor attacks, we examine a range of cognitive biases that can lead to faulty decision making. These biases include the confirmatory bias, anchoring bias, attribution error, illusory correlation, hindsight bias, and egocentrism. We also discuss how one combats such biases. Raising awareness of these potential traps certainly can help individuals improve their decision making, but awareness alone will not protect us from failure. We discuss how effective groups can help counter the failings of individuals, a topic we examine in further depth in the next module of the course.

Outline

- I. Many other cognitive biases exist. We will focus on a few more of them in this lecture: first, and in the most depth, on the confirmation bias. This is one of the most prevalent biases that we face each day.
 - A. The confirmation bias refers to our tendency to gather and rely on information that confirms our existing views and to avoid or downplay information that disconfirms our preexisting hypotheses.
 1. As Roberta Wohlstetter described in her study of the Pearl Harbor attacks, decision makers often exhibit a “stubborn attachment to existing beliefs.”
 2. One experimental study showed that we assimilate data in a biased manner because of the confirmatory bias.
 3. The study examined people’s attitudes toward the death penalty and examined how individuals reacted to data in support of, as well as against, their preexisting point of view on the issue.
 4. That study showed that the biased assimilation of data actually led to a polarization of views within a group of people after they looked at studies regarding the death penalty.
 - B. NASA’s behavior with regard to the *Columbia* shuttle accident in 2003 shows evidence of the confirmation bias.
 1. There was clearly an attachment to existing beliefs that the foam did not pose a safety threat to the shuttle.
 2. The same managers who signed off on the shuttle launch at the flight readiness review, despite evidence of past foam strikes, were responsible for then judging whether the foam strike on *Columbia* was a safety of flight risk.
 3. It’s very difficult for those people to detach themselves from their existing beliefs, which they pronounced publicly at the flight readiness review.
 4. Each safe return of the shuttle, despite past foam strikes, confirmed those existing beliefs.
 5. NASA also showed evidence of not seeking disconfirming data.
 6. They did not maintain launch cameras properly.
 7. The mission manager also repeatedly sought the advice of an expert whom everyone knew believed foam strikes were not dangerous, while not speaking directly with those who were gravely concerned.
- II. The anchoring bias refers to the notion that we sometimes allow an initial reference point to distort our estimates. We begin at the reference point and then adjust from there, even if the initial reference point is completely arbitrary.
 - A. Scholars Amos Tversky and Daniel Kahneman demonstrated this with an interesting experiment.
 1. They asked people to guess the percentage of African nations that were United Nations members.
 2. They asked some if the percentage was more or less than 45% and others whether it was more or less than 65%.
 3. The former group estimated a lower percentage than the latter. The scholars argued that the initial reference points served as anchors.
 - B. This bias can affect a wide variety of real-world decisions.
 1. Some have argued that people can even use anchoring bias to their advantage, such as in a negotiation. Starting at an extreme position may serve as an anchor, and the other side may find itself adjusting from that initial arbitrary reference point.
 2. Think of buying a car. The manufacturer’s suggested retail price often serves an anchor, or certainly the dealer would like it to serve as anchor. They would like you to adjust off of that number.
 3. Some have said that anchoring bias requires the use of unbiased outside experts at times. For instance, does a Wall Street analyst anchor to the prior rating on a stock and therefore not offer as accurate a judgment as someone new to the job of evaluating that company’s financial performance?
- III. There are a number of other biases that psychologists have identified.
 - A. Illusory correlation refers to the fact that we sometimes jump to conclusions about the relationship between 2 variables when no relationship exists.
 1. Illusory correlation explains why stereotypes often form and persist.
 2. One very powerful experience can certainly feed into illusory correlation.

3. Sometimes, odd things happen that show correlation for quite some time, but we have to be careful not to conclude that there are cause-effect relationships. There have been links made between Super Bowl winners and stock market performance, or between the Washington Redskins' performance and election results.
- B. Hindsight bias refers to the fact that we look back at past events and judge them as easily predictable when they clearly were not as easily foreseen.
- C. Egocentrism is when we attribute more credit to ourselves for a particular group or collective outcome than an outside party would attribute.

IV. How can we combat cognitive biases in our decision making?

- A. We can begin by becoming more aware of these biases and then making others with whom we work and collaborate more aware of them.
- B. We also can review our past work to determine if we have been particularly vulnerable to some of these biases. After-action reviews can be powerful learning moments.
- C. Making sure that you get rapid feedback on your decisions is also important, so as to not repeat mistakes.
- D. Tapping into unbiased experts can also be very helpful.
- E. Effective group dynamics can certainly help to combat cognitive biases. A group that engages in candid dialogue and vigorous debate may be less likely to be victimized by cognitive biases. We will discuss this more in the next module of the course on group decision making.
- F. Overall, though, we should note that these biases are rooted in human nature. They are tough to avoid.

Suggested Reading:

Bazerman, *Judgment in Managerial Decision Making*.

Wohlstetter, *Pearl Harbor*.

Questions to Consider:

1. How does confirmation bias contribute to polarization of attitudes?
2. Why is awareness alone not sufficient to combat cognitive biases?
3. What are some examples of confirmation bias that have affected your decision making?

Lecture Four

Framing—Risk or Opportunity?

Scope: Drawing on case studies of the September 11 attacks, the automobile and newspaper industries, and the Vietnam War, we discuss the concept of framing. Frames are mental structures—tacit beliefs and assumptions—that simplify people’s understanding of the world around them and help them make sense of it as they decide and act. For instance, many national security officials viewed the threats facing the United States at the start of this century through a cold war frame, even though we had moved well beyond that era by the time of the 9/11 attacks. Frames can help us, because they enable us to deal with complexity without being overwhelmed by it. However, the frames we adopt also can be quite constricting. This lecture explains how powerful frames can be and how the way that a problem is framed can, in fact, drive the types of solutions that are considered. We examine the difference between framing something as a threat versus an opportunity, as well as how framing affects our propensity to take risks. We conclude by discussing how one can encourage the use of multiple frames to enhance decision-making effectiveness.

Outline

- I. Frames are mental models that we use to simplify our understanding of the complex world around us, to help us make sense of it. They involve our assumptions, often taken for granted, about how things work. How we frame a problem often shapes the solution at which we arrive.
 - A. Economists believe that we estimate expected values when confronted with risky situations and that framing of the situation should not matter.
 1. Economists would argue that we weight different possible outcomes with probabilities when faced with a risky situation and then determine what the expected value will be.
 2. Most of us are slightly risk averse, meaning we would rather take an amount slightly less than the expected value, if given to us with certainty, rather than take the risk of a high or low outcome.
 3. Economists do not believe that how we frame the situation should matter in terms of our decision making in risky situations.
 - B. Prospect theory suggests that framing matters. Even small changes in wording have a substantial effect on our propensity to take risks.
 1. According to prospect theory, framing does matter a great deal. If we frame a situation in terms of a potential gain, we act differently than if we frame it in terms of a potential loss.
 2. Amos Tversky and Daniel Kahneman argued that framing situations in terms of a loss causes us to take more risks.
 3. In one famous experiment, they showed that we act differently if a decision is framed in terms of the probabilities that lives will be saved from a particular medical regimen versus in terms of deaths that will be prevented.
 4. Their work shows that we make different decisions given alternative frames, even if the expected values in both situations are identical.
 - C. Prospect theory may be one explanation for the escalation of commitment that occurs when there are high sunk costs.
 1. The Vietnam War was a tragic example of the escalation of commitment. We gradually kept increasing our involvement, despite poor results.
 2. One could argue that we poured more resources into the war because we framed the situation in terms of a loss. Thus, we had a propensity to take more and more risk to try to avoid the loss.
- II. Management scholars have extended this early work by arguing that we act differently when situations are framed as opportunities versus threats.
 - A. According to this theory, organizations act very rigidly when faced with threats, and they act more much flexibly and adaptively if they frame those same situations as opportunities.
 1. In particular, scholars have argued that we tend to simply “try harder” using well-established routines and procedures when we frame something as a threat.
 2. However, we may not think differently, or find new ways of working effectively. We may be doing more of what got us in trouble in the first place.
 - B. More recent work suggests that framing a situation as a threat may be useful in that we do allocate more resources to the problem, but we need to frame it as an opportunity to use those resources effectively.
 1. In other words, we need to balance these 2 competing frames.

2. One study examined how the newspaper industry responded to the threat of the Internet.
3. The study found that those who exclusively examined it as a threat were responding by pouring dollars at the Web. However, they tended to simply replicate their hard copy online; it wasn't a creative use of the technology.
4. Those who framed it as an opportunity did respond more adaptively, but they didn't necessarily allocate sufficient resources to the situation.
5. The most effective organizations initially assessed the threat, but then reframed the Web as an opportunity to do exciting new things.

III. Framing is a general phenomenon, not simply about binary categories.

- A. We've always adopted mental models that shape our way of looking at situations. Sometimes, though, those mental models become outdated.
 1. In the case of the September 11 terrorist attacks, the 9/11 Commission found that many government agencies were still operating with a cold war frame at the time.
 2. The cold war mind-set viewed threats as emanating primarily from nation-states.
 3. The cold war mind-set emphasized conventional warfare and arming ourselves to protect against military attacks by the armies of other nations.
 4. The various arms of the federal government were all still organized based on this cold war model of national security. They were not organized to defend against these so-called asymmetric threats.
- B. Mental models ultimately come down to our taken-for-granted assumptions about how the world works. These assumptions can easily get outdated, and yet we don't make them explicit and challenge them.
 1. USC professor James O'Toole once identified the core assumptions of the management team at General Motors in the 1970s.
 2. His analysis suggested that GM was unable to recognize how and when these assumptions had become outdated.
 3. When the threat of Japanese imports arose, they first dismissed it. Then, having framed it as a threat, they acted very rigidly in response.

IV. What should individuals do about the fact that framing can have such a powerful effect on our decision making?

- A. First, leaders need to be careful about imposing their frame on their management team. In some situations, leaders may want to hold back on offering their assessment, because their framing of the situation may constrict the range of advice and alternatives brought forth by their team.
- B. We also should consider adopting multiple frames when we examine any particular situation. In other words, we ought to define our problems in several different ways, because each definition naturally tilts us toward one kind of solution.
- C. Finally, we need to surface our implicit assumptions, and then probe and test those presumptions very carefully.

Suggested Reading:

Kahneman and Tversky, *Choices, Values, and Frames*.

O'Toole, *Leading Change*.

Questions to Consider:

1. How does framing of a situation shape the risks that we take and the amount of resources that we expend?
2. Why do we find it so difficult to shake old mental models?
3. How can we reframe situations to encourage more divergent thinking?

Lecture Five

Intuition—Recognizing Patterns

Scope: What is intuition? How does it work? What are the classic mistakes that we make when employing our intuition? Can one develop intuition? How do we combine rational analysis and intuition effectively? Drawing on case studies from healthcare, the military, firefighting, and the video-game industry, this lecture seeks to answer these questions. Intuition, fundamentally, represents an individual's pattern-recognition abilities based on their past experience. When we use intuition, we do not go through a rational analysis of multiple alternatives, with deep evaluation of the consequences of each option. Yet our intuition often leads to good decisions. This lecture explains how the intuitive process works, a process whose steps we often are not aware of as they unfold. As it turns out, intuition is more than simply a gut instinct. It involves powerful cognitive processes that draw on the wealth of experiences that we have stored in our brains. Of course, intuition can lead us astray in certain predictable ways, and we will explore those pitfalls as well.

Outline

- I. What is intuition? How does it affect the way we make decisions?
 - A. Intuition is fundamentally about pattern recognition and pattern matching based on our past experience. Psychologist Gary Klein's work has been informative on this matter.
 - B. When we use our intuition, we do not evaluate a whole series of alternatives, as many decision-making models suggest that we should.
 - C. Instead, we assess a situation, and we spot certain cues.
 - D. From these cues, we recognize patterns based on our past experience. We match the current situation to these past patterns.
 - E. As part of that pattern matching, we often reason by analogy to past situations that seem similar to the one we currently face.
 - F. Based on that pattern recognition, we then embark on a course of action. We adopt certain "scripts" from our past experience.
 - G. We don't explore a wide range of options; instead, we tend to mentally simulate our initial preferred action. We envision how it might play out. If it seems feasible, we go with it. If not, then we might explore other options.
- II. How does intuition work for actual decision makers facing challenging situations?
 - A. Firefighters use intuition when determining how to fight a blaze. They often do assess a wide range of options, but they don't have time to do so in many cases.
 1. Klein gives an example of a firefighter who assessed a situation that appeared to be a simple kitchen fire.
 2. However, certain cues (or features of the situation) did not match the pattern of experience that the firefighter had had with kitchen fires.
 3. From that, he concluded that something did not seem right. This didn't seem like an ordinary kitchen fire.
 4. He ordered his men out of the building right away. The floor collapsed shortly thereafter. As it turned out, this fire was actually emanating from the basement. It was far more serious than a simple kitchen fire.
 - B. Nurses and doctors use intuition all the time, despite all the data that you might think drive their decision making.
 1. Here, you see a clear distinction between novices and experts. Novices don't have the experience to engage in the pattern recognition that an expert can employ.
 2. Nurses often report that they took action simply because they didn't think things felt right. Something told them that the patient was in more trouble than the data suggested.
 3. In one study, we examined a mechanism called rapid response teams in hospitals.
 4. These teams were designed to pick up on early signs of a potential cardiac arrest and to trigger intervention to prevent such an outcome.
 5. Nurses were given a set of quantitative criteria to look for in assessing patients at risk. They were also told to call the team if they simply felt uncomfortable about a situation.
 6. Many hospitals reported that a substantial number of calls came when experienced nurses felt uncomfortable but the vital signs appeared relatively normal.
 7. One hospital reported to us that nurse concern (without vital sign abnormalities) was the best predictor that intervention was required to prevent a bad outcome from unfolding.
 - C. In a case study on Electronic Arts, the leading video-game publisher, we found that intuition played a very large role in decision making.

1. The leaders of the development process did not have a formal method for evaluating games under development.
2. Instead, they relied on their intuition to determine whether a game appeared viable.
3. They often drew parallels to past situations.
4. The Electronic Arts case illustrates one of the challenges of organizations that rely heavily on intuitive decision making. The question there was, how do you pass on this wisdom to newer managers? It's hard to codify that knowledge.
5. Hospitals face the same issue with nurses. How do you pass along that intuition? They find that much of it occurs through apprenticeship and the way that expert nurses communicate their thought process to novices.
6. Thinking out loud turns out to be a key practice that expert nurses employ. Such behaviors work much more effectively than trying to write down intuitive wisdom.

III. What are the dangers of intuition? How can it lead us astray?

- A. We are susceptible to cognitive biases, as described in the 2 prior lectures.
- B. Research has shown that we sometimes misuse analogies.
 1. We do not make the right match to past situations in our experience.
 2. We draw the wrong lessons from those analogous situations.
 3. We will explore this important issue more in the next lecture.
- C. In highly complex, ambiguous situations, sometimes the complexity obscures our pattern-recognition ability.
- D. We sometimes have outdated mental models, particularly regarding cause-and-effect relationships.
- E. We fail to question well-established rules of thumb. For instance, many industries adopt simple rules of thumb; they become the conventional wisdom. However, they can become outdated.
- F. Intuition can lead us astray when we move outside of our experience base. Then, the new situations don't fit nicely with the past patterns we have seen.
- G. Finally, it's very hard to communicate our intuitive judgments and choices. Thus, it can be hard to persuade others to commit to our intuitive decisions or to get them to understand how and why we made that choice. This can have a detrimental effect on decision implementation.

IV. How can we communicate our intuition more effectively?

- A. Often, when a leader uses intuition, people misinterpret the leader's intent, and therefore implementation suffers.
 1. Gary Klein has shown this in his research with military commanders.
 2. The idea is that people need to understand your rationale and your intent, because in a large organization, they will then have to make their own decisions out in the field during the execution process. You want them to make decisions consistent with your original intent.
 3. Klein works on exercises with military commanders where they try to issue orders with clear intent and then subordinates feed back to them what they perceive the intent to be.
 4. Military commanders then learn how to clarify their explanations so as to make their thinking more transparent.
- B. Organizational scholar Karl Weick has proposed a simple 5-step process for communicating intuitive decisions and garnering feedback so as to ensure clear understanding on the part of a team.
 1. Here's what I think we face.
 2. Here's what I think we should do.
 3. Here's why.
 4. Here's what we should keep our eye on.
 5. Now, talk to me.

V. Leaders should find ways to combine intuitive judgment with formal analysis. Here are a number of ways to effectively do so.

- A. Use analysis to check your intuition, but not simply to justify decisions that have already been made.
- B. Use intuition to validate and test the assumptions that underlie your analysis.
- C. Use analysis to explore and evaluate intuitive doubts that emerge as you prepare to make a decision.
- D. Use the intuition of outside experts to probe the validity of your analysis.
- E. Use mental simulation (and premortem exercises) to enhance your analysis of alternatives.
- F. Do not try to replace intuition with rules and procedures.

Suggested Reading:

Benner, *From Novice to Expert*.

Klein, *Sources of Power*.

Questions to Consider:

1. What are the positive and negative effects of utilizing intuition to make key decisions?
2. How can we integrate intuition and analysis more effectively in our decision making?
3. What can we do to refine our pattern-recognition capabilities?

Lecture Six

Reasoning by Analogy

Scope: Reasoning by analogy represents one powerful dimension of the intuitive process. This lecture explains how analogical reasoning works. Put simply, when we assess a situation, we often make references or analogies to past experiences. Often, these analogies prove very helpful to us as we try to make sense of an ambiguous and challenging problem or situation. However, analogical reasoning can cause us to make flawed decisions as well, largely because we tend to overemphasize the similarities between 2 situations when we draw analogies. Moreover, we tend to underemphasize key differences, or ignore them altogether. Drawing on case studies such as the Korean War and business examples in industries such as beer and chocolate, we explain how and why analogies lead us astray, as well as how you can improve your analogical reasoning capabilities.

Outline

- I. Whether making decisions intuitively or analyzing a situation more formally, we often rely on reasoning by analogy to make key choices.
 - A. What is reasoning by analogy?
 1. Analogical reasoning is when we assess a situation and then liken it to a similar situation that we have seen in the past.
 2. We consider what worked, as well as what didn't work, in that past situation.
 3. Then, based on that assessment, we make a choice about what to do—and what definitely not to do—in the current situation.
 - B. Why is it so powerful?
 1. Analogical reasoning can save us time, because we do not necessarily have to start from scratch in search of a solution to a complex problem.
 2. Analogical reasoning enables us to look back historically and avoid repeating old mistakes.
 3. It also enables us to leverage past successful choices to identify best practices.
 4. Research also shows that some of the most innovative ideas come when we think outside of our field of expertise and make analogies to situations in completely different domains. The analogy thus can be a powerful source of divergent thinking.
 - C. Why can analogical reasoning be troublesome?
 1. Research shows that we tend to focus on the similarities between the 2 analogous situations and downplay or ignore the differences.
 2. We also become overly enamored with highly salient analogies that have left an indelible imprint on us in the past, even when those analogies may not fit the current situation.
 3. We do not surface and seek to validate our underlying assumptions that are embedded in the analogical reasoning.
- II. What are some examples of faulty reasoning by analogy?
 - A. Richard Neustadt and Ernest May have done some of the groundbreaking work on analogical reasoning. They refer back to the Munich analogy, which so many political leaders refer to time and time again.
 1. The Munich analogy refers to Neville Chamberlain's appeasement of Hitler in the late 1930s.
 2. Whenever a dictator engages in an aggressive maneuver, we hear leaders harken back to the Munich situation. They argue that we should confront, not appease, the dictator given the lessons of Hitler in the 1930s.
 3. Neustadt and May argue that we overuse the analogy.
 4. They give an example of one leader who used it well but did not fully explore the analogy, leading to later errors. Their example is Truman with regard to Korea.
 5. Analogical reasoning, with reference to Munich, led Truman to rightfully stand up and defend South Korea, according to these 2 scholars.
 6. However, failing to completely vet the analogy led Truman to later endorse a move to try to unify the Korean Peninsula—not an original objective of the war effort.
 7. This miscalculation led to Chinese entry into the war and the long stalemate that followed.
 - B. Many business leaders also have fallen down when they have reasoned by analogy.
 1. There is the example of Staples founder Tom Stemberg and early Staples employee Todd Krasnow, who launched the dry-cleaning chain called Zoots.
 2. They explicitly drew analogies to the office supplies market back before Staples and other superstores were formed.

3. The analogy proved not to be a perfect match, and Zoots struggled mightily.
4. Another example is when Pete Slosberg, founder of Pete's Wicked Ale, tried to move into the specialty chocolate market.
5. Finally, we have the Enron example. The company reasoned by analogy as part of their new business creation strategy.
6. Enron drew analogies to the natural gas market, where they originally had success with their trading model. Poor use of analogies led them far afield, eventually even taking them to the broadband market.
7. In the Enron case, we see what scholars Jan Rivkin and Giovanni Gavetti describe as "solutions in search of problems." The Enron executives did not reason by analogy because they had a problem to solve. Instead, they started with something that had worked in the past, and they searched for new venues that they deemed analogous.
8. The temptation with such efforts is to seriously downplay differences and to focus on similarities, particularly given the incentive schemes at Enron.

III. How can we improve our reasoning by analogy?

- A. Neustadt and May have argued that there are 2 key things that we can do to refine our analogical reasoning.
 1. We can make 2 specific lists: one describing all the likenesses between 2 situations we deem to be analogous and another describing the differences.
 2. Their second technique is to write down (and clearly distinguish), that which is known, unknown, and presumed in the situation. The objective is to clearly separate fact from assumption and to then probe the presumptions carefully.
- B. Writing these lists down is critically important.
 1. We need to be very methodical in writing down these lists, because it forces us to be much more careful in our thinking. We protect against sloppy analogical reasoning this way.
 2. Moreover, by writing these lists down, we help others conduct careful critiques of our thinking.
- C. We can accelerate and enhance our analogical reasoning capabilities.
 1. Certain types of learning experiences can help us refine our analogical reasoning abilities. For instance, one benefit of the case method is that it exposes us vicariously to many, many different situations.
 2. Over time, we can compare and contrast those situations and try to apply past experience to new case studies we examine.
 3. We become better and better at recognizing patterns, and we refine our ability to distinguish useful analogies from dangerous ones.
 4. In a way, business education is as much about refining our intuition, and specifically our analogical reasoning capabilities, as it is about learning formal analytical frameworks.

Suggested Reading:

Neustadt and May, *Thinking in Time*.

Salter, *Innovation Corrupted*.

Questions to Consider:

1. What are some of the dangers of reasoning by analogy?
2. What types of analogies are most salient?
3. How can we sharpen our analogical reasoning?

Lecture Seven

Making Sense of Ambiguous Situations

Scope: Until now, we have treated decision making as a fairly linear process (i.e., we think and then we decide). However, Karl Weick coined the term sensemaking to describe how we do not always think and then decide. Instead, we sometimes decide and then think about how we have behaved, which then leads to further decisions. Action becomes an iterative process of decision making and sensemaking. This sensemaking process, which we engage in all the time, shapes how we behave. Drawing on 2 fascinating cases of wildland firefighters—in the Mann Gulch and Storm King Mountain fires—we examine how sensemaking processes can unfold in ambiguous situations and how poor decisions and actions can transpire.

Outline

- I. What is sensemaking, and how does it affect our individual decision-making capabilities?
 - A. Traditional models of decision making suggest that we decide, and then we act. As we noted in our discussion of myths during Lecture One, decision-making processes are not always as linear as the models suggest.
 1. Sometimes we take actions—we try things—and then we try to make sense of those behaviors.
 2. We also make a number of choices through a process of trying to make sense of the actions of those around us—particularly those who lead us.
 3. Sensemaking becomes a powerful tool for decision makers particularly in highly ambiguous situations. In those cases, we cannot choose and act unless we can assess the situation properly.
 4. Sensemaking, in those ambiguous situations, often involves trying to sort out conflicting signals, as well as trying to separate the key signals from all the background noise.
 - B. We use certain mental models to make sense of ambiguous situations.
 1. The use of those mental models helps us identify cause-effect relationships more readily. Ultimately, sensemaking is about understanding the connections among various actions and events.
 2. Making connections and identifying cause-effect relationships helps inform our further action.
 3. Sensemaking, then, is really about how we reflect and learn from experience and then use that learning to inform further action.
 4. As we noted earlier, however, we can get into trouble when the mental models become outdated. In those cases, we may have a hard time comprehending novel situations.
- II. Sometimes, our sensemaking capabilities can break down and lead to serious failures. Scholar Karl Weick has described this as the “collapse of sensemaking.” It can lead to poor decisions and flawed actions.
 - A. Weick first described the collapse of sensemaking in reference to a famous forest fire that took place in 1949. Initially, the smokejumpers made sense of actions around them and concluded that it was a routine fire.
 1. In the summer of 1949, 12 smokejumpers died fighting a seemingly routine fire that suddenly transformed into a deadly blowup at Mann Gulch in Montana. Only 3 men survived.
 2. Karl Weick has argued that as time passed on the mountain, the smokejumpers’ initial assumptions about their situation slowly began to unravel.
 3. Originally, the smokejumpers assessed the situation as quite routine. They did not see this as a novel or dangerous situation. They thought that they would have the fire under control by midmorning.
 4. Numerous early actions by their leader reinforced this initial situation assessment.
 5. For instance, their leader, Wag Dodge, stopped to eat his dinner when the smokejumpers landed on the ground. The smokejumpers “made sense” of this action by concluding that he must not have thought the fire was too serious.
 6. At one point, one smokejumper stopped to take photographs of the fire. Again, this reinforced the initial situation assessment.
 - B. The collapse of sensemaking began when Dodge’s attitude about the fire suddenly changed.
 1. Shortly after he stopped eating dinner and began working on the fire, Dodge expressed concern about the fire. Suddenly, his attitude shifted.
 2. The crew could not reconcile his earlier actions with the sudden alarm in his voice.
 3. In the midst of the crew’s confusion, with the roaring fire at their heels, Dodge yelled for them to drop their tools. When nothing around them appeared rational, holding on to their tools—which symbolized their identity as firefighters—seemed the only thing that *did* make sense.
 4. Of course, holding onto the tools slowed them down, thereby heightening their risk of not being able to outrun the fire.

5. Finally, Wag Dodge decided to light a small fire in front of the raging blowup, amid a grassy area.
 6. He lay down in the ashes, and he called out to his team to join him.
 7. That behavior made no sense at all to the smokejumpers, most of whom were very inexperienced. Their intuition, which was not rooted in as much experience as Dodge's, told them to run.
 8. Running proved to be the wrong move. Dodge survived, because the fire went right over him. His escape fire had burned all the grass in that small area, depriving the main blaze of fuel in that area.
 9. Weick argued that the inexperienced crew, who did not have Dodge's intuition, lost their ability to make sense of the situation very quickly, and this hurt their ability to act effectively.
- III.** We saw the sensemaking breakdown again in a fire that took place in 1994, called the Storm King Mountain, or South Canyon, fire.
- A. Again, we had firefighters refusing to drop their tools amid a blowup.
 - B. Tools are a symbol of firefighting. They are embedded in the firefighter's identity. Dropping your tools means you are admitting that you can't fight the fire. That is a very difficult judgment to make.
 - C. In fact, when a blowup is going on, and many homes are in danger, it doesn't seem to "make sense" to give up these most important tools.
 - D. Some smokejumpers at South Canyon likened dropping their tools to running up a white flag.
 - E. One firefighter was actually found dead still holding his saw in his hands.
- IV.** These fires, especially the Mann Gulch blaze, remind us of the important link between intuition and sensemaking.
- A. Dodge came to believe very quickly that the fire was very dangerous, and he knew to light the escape fire because of his ability to recognize patterns. He was matching what he saw to his past experiences, making sense of what he saw.
 - B. Dodge could do this because he had much more experience than most of the smokejumpers on his team.
 - C. Dodge had never started or seen the escape fire tactic before in his life.
 1. He invented it on the spot—in the midst of the blaze.
 2. He noticed cues in the situation that suggested this was not a routine fire.
 3. He recognized that he could not outrun the fire, again based on his experience.
 4. He had seen a backfire tactic used, and he adapted that concept to this situation, recognizing that a backfire would not work here.
 - D. Unfortunately, Dodge could not communicate his intuition in the midst of the blowup.
 1. He was described as a poor communicator.
 2. He also didn't have much time to explain his thinking to his crew.
 3. They had already "made sense" of the situation, and his actions ran completely contrary to their assessment. Thus, he had a huge obstacle there in terms of persuading them.
 4. It's a great example of how intuition can be hard to communicate.
 5. It also shows how there can be conflict between how you make sense of a situation and how others make sense of it. That can lead to problems.
- V.** Many have taken important leadership lessons from the Mann Gulch fire.
- A. Michael Useem has argued that Dodge made critical mistakes long before the blowup occurred that made him less credible and effective as a leader. Thus, his crew was not as amenable to understanding or going along with how he came to make sense of the situation.
 - B. Dodge was not considered an effective communicator.
 1. He was described as an individual of few words. People said it was "hard to know what he was thinking."
 2. Thus, his crew members had a hard time understanding his intuitive reasoning and sensemaking. They couldn't understand his rationale.
 - C. Dodge also lost credibility over time during the blaze, having not done enough to build up a base of credibility prior to the fire.
 1. Dodge did not attend the 3-week summer training with his men. His credibility relied on his reputation and positional authority, as many of the crew members had never worked with him.
 2. The team did not train as a team. It had never worked together as a unit on prior fires. People worked on a particular blaze based on a rotation system.
 3. His credibility eroded during the early stages of the fire. There was a rough landing, a broken radio, and no ground crew. This did not impress his crew members.
 4. He left the crew several times during the early stages. His departures, coupled with his poor communication skills, eroded his credibility further.

5. By the time he set the escape fire, his crew lacked confidence in him. Thus, they did not follow him.
6. Even if there was no time for communication, his intuition and sensemaking, a huge base of credibility, and a well-designed team structure might have helped him persuade others to join him in the escape fire. It could have made up for the sensemaking challenges.
7. For all leaders, the lesson is clear. You must build trust, spend time designing and bringing together your team, and then communicate your intuition and sensemaking clearly if you want to succeed in highly risky and ambiguous situations.

Suggested Reading:

Useem, *The Leadership Moment*.

Weick, *Sensemaking in Organizations*.

Questions to Consider:

1. Why do leaders sometimes find themselves in Wag Dodge's predicament?
2. How can leaders encourage collective sensemaking that results in a shared understanding of a situation?
3. Does sensemaking always lead to better future decisions? Why or why not?

Lecture Eight

The Wisdom of Crowds?

Scope: Up until now, we have examined individual decision making, largely focused on cognition. Of course, most of us make many decisions as part of a group or team. The question then arises, are groups better decision makers than individuals? Do teams achieve synergistic benefits by blending together the talents and expertise of various members? In this lecture, we begin by talking about James Surowiecki's book, *The Wisdom of Crowds*. In that book, the author shows how often a large "crowd" of people actually seems to be more intelligent than any particular individual. In this lecture, we will look at how and why crowds tend to have such wisdom, using examples ranging from game shows to business cases. However, we will also examine the major conclusions from the literature on small groups and teams. We will see why many teams do not achieve their potential. They suffer so-called process losses (i.e., the interaction of team members actually does not yield synergistic benefits). We will examine several factors that contribute to process losses, such as the information-processing problems that tend to occur in groups.

Outline

- I. We now shift from individual decision making to group decision making, which will be the topic of the next 9 lectures.
 - A. We will begin by considering how teams can be more effective than individuals—how 2 or more heads can be smarter than one.
 - B. Then we will begin looking at why groups often do not achieve their potential, why they actually do worse at times than the best individual decision makers.
 - C. Ultimately, we will spend a great deal of time talking about how to improve group decision making and avoid many of the classic team decision-making pathologies.
- II. Are groups better decision makers than individuals?
 - A. The conventional wisdom is that groups can make better decisions than individuals because they can pool the diverse talents of a team of individuals.
 - B. The notion is that groups can achieve synergistic benefits. Merging ideas from diverse perspectives creates the potential for new ideas and options that no individual could create on their own.
 - C. Unfortunately, many groups do not realize those potential synergies; they experience process losses. By that, we mean that the groups fail to capitalize on the diverse talents of the members, and they actually do worse than the best individual in the group could do on his or her own.
- III. In some situations though, we do see that groups do better than individuals.
 - A. In his bestselling book *The Wisdom of Crowds*, James Surowiecki argues that a large "crowd" of individuals can actually be more intelligent than any individual expert.
 1. Surowiecki explains this phenomenon by describing what happened on the popular game show *Who Wants to Be a Millionaire?*
 2. As you may recall, participants had several techniques that they could employ to help them answer a difficult question. For instance, they could "ask the audience," in which case the audience would vote on which of the 4 possible answers was correct.
 3. At the time of Surowiecki's book's publication, the audience had answered correctly an astounding 91% of the time!
 4. The point is that the aggregation of all those individual judgments leads to a good answer, even though we haven't handpicked the group to include a bunch of experts.
 5. Surowiecki provides many examples of how the aggregation of information in this manner provides better-quality decisions than most individual experts can make.
 - B. Surowiecki and others have shown many other examples of this pooling of intellect, where a crowd does better than most individuals could.
 1. For instance, a Canadian mining company created a contest whereby people around the world could examine their geological data and offer a recommendation as to where to search for gold on their properties. The contest yielded solutions that had eluded their in-house experts.
 2. Many other companies are trying to leverage the power of this mass collaboration. Even the U.S. federal government has done this.
 3. Many people are using wiki technology to pool the intellect and judgments of many individuals.

4. Prediction markets are also an example of this phenomenon. Examples include the Iowa Electronic Markets, which tries to predict elections, and the Hollywood Stock Exchange, which tries to marshal the judgments of thousands of people to predict how well particular films will do.
- C. Surowiecki argues, however, that there are several critical preconditions for making the crowd smarter than individuals.
1. You need to have diversity within the crowd: Many different disciplines, perspectives, and areas of expertise must be represented.
 2. You have to have decentralization, meaning that the crowd is dispersed, and people with local and specific knowledge can contribute.
 3. You have to have some effective way of aggregating all the individual judgments.
 4. Finally, and most importantly, you must have independence. In other words, you can't have individuals being able to sway others, or situations in which pressures for social conformity can impact people. This is the key condition that usually doesn't hold in actual teams within organizations. They are interacting closely, and they are interdependent.
- IV. What are some of the process losses that hinder groups whose members are interdependent, unlike the crowds in Surowiecki's examples?
- A. Certainly, pressures for conformity arise within groups. We will talk about that in depth in the next lecture.
 - B. We also have schisms that develop within teams. Scholars have described how negative outcomes result when "fault lines" emerge within teams.
 1. Fault lines are schisms that often emerge based around natural demographic subgroups within a team.
 2. We can see in-group/out-group dynamics emerge in these situations, which leads to dysfunctional conflict.
 - C. In some groups, they exhibit an inability to manage air time, such that a few individuals dominate the discussion. Others are not able to get their ideas on the table.
 - D. Free riding is another process loss. Some members may not feel personal accountability, and they may loaf, expecting others to carry the load.
 - E. Information-processing problems also arise in many groups, such that pooling and integration of individual knowledge and expertise does not occur.
 1. For instance, Gary Stasser's research shows that team members tend to discuss common information quite extensively but often fail to surface all the privately held information that group members possess.
 2. Moreover, group members tend to discuss private information less than common information, even when privately held information does surface.
 3. The lack of adequate information sharing is one of the most perplexing challenges that teams face, and that hinders their decision-making effectiveness.
 - F. Finally, information filtering can occur in many groups, whereby some individuals funnel data as it moves up the hierarchy. They prevent a leader (or a team) from having access to key data that may help them make a better decision.
- V. We close this lecture with an example of a group process loss, with particular emphasis on the problem of information filtering.
- A. The case is the Son Tay incident during the Vietnam War.
 1. This was an operation designed to free prisoners of war in North Vietnam during the Nixon administration.
 2. During the summer of 1970, intelligence indicated the location of a camp with American prisoners of war.
 3. The United States prepared a special rescue operation, and Nixon approved it.
 4. During the fall, information arose that suggested that perhaps the prisoners were no longer at the camp.
 5. Key officials chose to withhold that information from the president.
 6. Some have argued that Nixon's behavior caused his advisers to think that his mind was already made up and that he didn't want to hear this new information.
 7. The mission went ahead, and the soldiers performed brilliantly. However, there were no prisoners at the camp. It was a major blunder.
 - B. The Son Tay incident demonstrates to us how groups can fail to capitalize on all the information and expertise of their members. We do not always find the ways to pool expertise effectively, despite the clear promise that teams hold.

Suggested Reading:

Steiner, *Group Process and Productivity*.

Surowiecki, *The Wisdom of Crowds*.

Questions to Consider:

1. In what circumstances is a team likely to outperform individuals working on their own?
2. In what circumstances are individuals likely to outperform teams?
3. How and why do people filter information, and what can be done to reduce the negative impact of filtering?

Lecture Nine

Groupthink—Thinking or Conforming?

Scope: Building on the concept of process losses, we will examine a key reason why groups tend to make flawed decisions—namely, that they experience groupthink. Drawing on the famous Bay of Pigs case study, we will explore Irving Janis’ theory of groupthink: the phenomenon in which a cohesive group finds itself prematurely converging on a solution to a problem due to powerful pressures for conformity. Through an in-depth analysis of President John F. Kennedy and his advisers, we will describe the factors that cause groupthink, as well as the symptoms and results of groupthink. We will show why dissenting views often do not surface in teams and how the lack of dissent can inhibit decision-making effectiveness.

Outline

- I. Groupthink is one of the most famous examples how and why a group can make very flawed decisions even if the group is cohesive and its members have great intellect, in-depth knowledge, and good intentions.
 - A. What is groupthink? According to social psychologist Irving Janis, groupthink is when a cohesive team experiences tremendous pressures for conformity, such that people strive for unanimity at the expense of critical thinking.
 - B. Put another way, groupthink is when we see team members “going along to get along.”
 - C. Janis has argued that groupthink is more likely to arise when groups are highly cohesive and when they face a great deal of stress or pressure.
- II. Janis developed his theory of groupthink based on an analysis of a number of decision fiascos involving American presidents. The central case that he studied was the Bay of Pigs decision by President Kennedy.
 - A. With the approval of President Eisenhower, the CIA trained a force of Cuban exiles in Central America to prepare them for a possible invasion to overthrow communist dictator Fidel Castro.
 - B. Within a few days of Kennedy taking office in 1961, the CIA presented its plan for using these exiles to invade Cuba.
 1. Kennedy asked the Joint Chiefs of Staff to take a look at the plan. They concluded it could work, but only with certain caveats—either they had to add U.S. soldiers to the plan or they had to be able to count on a substantial internal uprising within Cuba to help the exiles.
 2. After a few weeks, the CIA argued that the time was now to invade. They cited several factors arguing for immediate action.
 3. The CIA acted as both the advocates for the plan as well as its principal evaluators or analysts. It had a vested interest in going forward with the plan.
 4. The entire decision-making process took part under the veil of secrecy. Key experts from within the administration did not join the cabinet meetings for their deliberations.
 - C. Candid dialogue and debate did not take place at these meetings.
 1. A number of people held back their concerns about the plan.
 2. Many assumptions were made during these meetings, but they were not well vetted.
 3. One key subordinate’s concerns were not shared by his boss with the president and the rest of the cabinet.
 4. The CIA dominated the meetings, and the one group with lots of status and experience that could have challenged the CIA—namely, the Joint Chiefs of Staff—tended to remain quite silent.
 - D. The group spent most of its time trying to tweak the proposal rather than examining other options.
 1. The group failed to consider any alternatives. It focused on a go/no-go decision.
 2. It ended up paring down the original proposal, but the proposal still retained its core weaknesses.
 3. Over time, the plan gathered tremendous momentum.
 4. There is evidence of the sunk-cost effect, causing the CIA to feel as though it had to go forward based on its past investments in this effort.
 - E. Ultimately, the president went ahead with the plan, despite his own concerns.
 1. The effort was a complete fiasco.
 2. Most of the rebels were either captured or killed.
 3. Castro retained power, and his internal prestige grew.
 4. The invasion harmed the United States’ reputation in the world, and specifically, it harmed U.S.-Soviet relations at the height of the cold war.
 5. The invasion may have led the Soviets to put nuclear missiles in Cuba in the following year.

- III.** What are the symptoms of groupthink, which are clearly evident in the Bay of Pigs case?
- A. The group feels that it is invulnerable—that it cannot fail.
 - B. The group rationalizes away disconfirming data and discounts warnings.
 - C. People have a belief that they are inherently better than their rivals.
 - D. The group maintains stereotyped views of the enemy.
 - E. The majority pressures group members who express a dissenting view.
 - F. The group comes to a belief that it unanimously supports a particular proposal, without necessarily knowing what each individual believes.
 - G. People self-censor their views, afraid to challenge the majority. They do not want to be marginalized or ostracized.
 - H. Certain individuals filter out information that might challenge the conventional wisdom within the group.
- IV.** What are the results of groupthink, which are clearly evident in the Bay of Pigs case?
- A. Groups discuss few (or no) alternatives.
 - B. People do not surface many of the risks associated with a plan that appears to have the support of the majority.
 - C. Once an option is dismissed, it rarely is reconsidered later to see if could be bolstered and made more plausible.
 - D. The group does not seek outside experts who do not have a vested interest in the matter.
 - E. The group exhibits the confirmation bias with regard to how it gathers and analyzes information.
 - F. The group does not discuss contingency plans.
- V.** What are some of the signals that your group is not having a sufficiently candid dialogue? Consider this a list of warning signs.
- A. Do management meetings seem more like hushed, polite games of golf or fast-paced, physical games of ice hockey?
 - B. Do subordinates wait to take their verbal and visual cues from you before commenting on controversial issues?
 - C. Are planning and strategy sessions largely about the preparation of hefty binders and fancy presentations, or are they primarily about a lively, open dialogue?
 - D. Do the same people tend to dominate management team meetings?
 - E. Is it rare for you to hear concerns or feedback directly from those several levels below you in the organization?
 - F. Have senior management meetings become “rubber stamp” sessions in which executives simply ratify decisions that have already been made through other channels?
 - G. Are people highly concerned about following rules of protocol when communicating with people across horizontal levels or vertical units of the organization?
 - H. Do you rarely hear from someone who is concerned about the level of criticism and opposition that they encountered when offering a proposal during a management team meeting?
- VI.** What are some of the major barriers to candid dialogue in teams and organizations?
- A. Structural complexity in and around the team can hinder open dialogue.
 - B. When people’s roles are ambiguous, that can be problematic.
 - C. Teams that have a very homogenous composition can have a harder time engaging in a high level of vigorous debate.
 - D. Large status differences among team members can squelch the level of candid dialogue.
 - E. Leaders who present themselves as infallible, who fail to admit mistakes, can squelch candid dialogue.

Suggested Reading:

Janis, *Victims of Groupthink*.

Schlesinger, *A Thousand Days*.

Questions to Consider:

1. What are the primary drivers of groupthink?
2. When is groupthink most likely to arise?
3. What can be done to break down the barriers to candid dialogue in groups?

Lecture Ten

Deciding How to Decide

Scope: Drawing on a case study of President Kennedy’s decision making in the Cuban missile crisis, we will examine how teams can prevent groupthink and improve their decision making. As it turns out, Kennedy and his advisers reflected on their failure after the Bay of Pigs, and they devised a series of process improvements that were aimed at preventing groupthink and encouraging dissenting views. In this session, we will introduce the concept of “deciding how to decide”—that is, how leaders can shape a decision-making process so that it will tend to yield more constructive dialogue and debate among team members rather than strong pressures for conformity.

Outline

- I. Let’s take a look at how President Kennedy behaved in another momentous decision that took place a year after the Bay of Pigs invasion. The Cuban missile crisis took place in October 1962, and that decision process illustrates how to prevent groupthink.
 - A. In October 1962, the CIA showed President Kennedy and his advisers photographs of missile bases being constructed in Cuba.
 - B. Kennedy formed a group—called ExComm—that met over the next 12 days to discuss how to deal with the situation.
 - C. Most people initially believed that the U.S. military should attack by air to destroy the missiles.
 - D. ExComm met repeatedly in conference rooms over at the State Department, not in the cabinet room at the White House.
 - E. President Kennedy did not attend all the ExComm meetings. He did not want to inhibit the dialogue, and he did not want the press to find out what was going on.
 - F. Robert McNamara proposed an alternative to an air strike. He suggested a naval blockade of the island of Cuba.
 - G. The CIA showed ExComm more photographs of missiles. They estimated that the missiles could kill 80 million Americans.
 - H. The group seemed to shift to favoring a blockade, but the president did not find their assessment and analysis completely persuasive. He asked them to continue deliberating.
 - I. ExComm split into 2 subgroups at that point. They developed white papers in support of 2 options: naval blockade versus military air strike.
 - J. The groups exchanged papers, and they critiqued each other’s proposals.
 - K. The group leveled the playing field during these meetings, with no chairman, rank, or rules of protocol.
 - L. Robert Kennedy and Ted Sorensen served as devil’s advocates during the decision-making process.
 - M. Finally, the 2 subgroups met with President Kennedy. They debated the issues in front of him. He listened, asked many probing questions, and ultimately decided in favor of a blockade.
- II. The Cuban missile crisis decision-making process had many positive attributes.
 - A. Clearly, they developed multiple options.
 - B. They engaged in vigorous debate and probed key assumptions.
 - C. The subgroups developed detailed plans for each option, and they wrote down those plans. Putting them in writing had many positive attributes.
 - D. Everyone clearly felt accountable; no one lacked “skin in the game.”
 - E. The devil’s advocates questioned all the ideas and probed for key risks. Using 2 devil’s advocates, rather than one, had many positives.
 - F. Everyone “spoke as equals”—people did not simply defer to the experts or to those with more status or power.
 - G. The subgroups were trying to help each other bolster their options; it was a collaborative effort to present the president with the 2 strongest alternatives from which to choose. They didn’t view it simply as a win-lose proposition in which they were competing with the other subgroup.
- III. As it turns out, President Kennedy tried to learn from his failure in the Bay of Pigs situation.
 - A. He met with Dwight Eisenhower after the Bay of Pigs.
 1. He sought advice and input from Eisenhower.
 2. Eisenhower asked him about how he had gathered advice from his advisers.

3. It was interesting to see Eisenhower ask about the decision process rather than focus only on the military tactics.
 4. In a way, it is not surprising, given Eisenhower's history. It's important to recall that he was chosen as supreme allied commander in late 1943 in large part due to his leadership skills, not his brilliance as a military strategist.
- B.** Kennedy worked with his advisers in 1961 to come up with a set of principles and techniques that would improve their decision-making process. These tactics were to be used in critical, high-stakes situations in the future.
1. Kennedy would absent himself from the group to foster a more frank discussion at times.
 2. People would be asked to serve as skeptical generalists, not simply as specialists representing their agency. People were asked to speak even on issues not pertaining to their area of expertise.
 3. They would suspend the rules of protocol.
 4. They would split into subgroups to generate and debate alternatives.
 5. They would assign devil's advocates to question and critique all proposals on the table.
 6. Kennedy would directly communicate with lower-level officials with relevant knowledge and expertise.
 7. The group would welcome outside, unbiased experts to join the deliberations.
- IV.** Kennedy's behavior illustrates an important approach for preventing groupthink, which I call "deciding how to decide."
- A.** Kennedy's best decision, in a way, was not the naval blockade. It was his decision to reform his decision process. It was the roadmap and the principles and techniques that he established regarding how he would approach critical decisions in the future.
- B.** What are the key dimensions of deciding how to decide?
1. Composition: Who should be involved in the decision-making process?
 2. Context: In what type of environment does the decision take place?
 3. Communication: What are the "means of dialogue" among the participants?
 4. Control: How will the leader control the process and the content of the decision?
- C.** In deciding how to decide, Kennedy recognized that leaders have to think about how directive they would like to be, both in terms of the content of the decision as well as the process of decision making.
1. In terms of content, they have to think about how much they want to control the outcome of the decision.
 2. In terms of process, they have to think about how they want to shape the way that the deliberations take place.
 3. In the Bay of Pigs, Kennedy was highly directive in terms of content but lost control of the decision process.
 4. In the Cuban missile crisis, Kennedy had a more balanced approach in terms of his control of both content and process.
- D.** Finally, Kennedy was effective at learning from his failure. He engaged in both content-centric and process-oriented learning.
1. He reflected on what they could have done differently in terms of the tactics of how to deal with an invasion, a dictatorial regime, and so on. This is content-centric learning.
 2. He also reflected on what they could have done differently in terms of their decision-making process. This is process-centric learning.
 3. Leaders need to take time to reflect on their decision processes and to identify what attributes they want to change moving forward.
 4. Leaders should consider conducting systematic after-action reviews following all major high-stakes decisions, whether successes or failures.

Suggested Reading:

Johnson, *Managing the White House*.

Kennedy, *Thirteen Days*.

Questions to Consider:

1. What lessons can we apply from the process Kennedy employed during the Cuban missile crisis?
2. Why don't leaders "decide how to decide" in many situations?
3. What are the positives and negatives of employing a devil's advocate in a decision-making process?

Lecture Eleven

Stimulating Conflict and Debate

Scope: In this lecture, we will examine the techniques that leaders and their teams can use to foster constructive conflict so as to enhance their decision making. Drawing on case studies about Emerson Electric, Sun Life Financial, and Polycom, we will describe and analyze 4 ways in which leaders can stimulate the clash of ideas within teams. First, teams can employ role-playing to stimulate debate. Second, they can employ mental simulation techniques. Third, they can use techniques for creating a point-counterpoint dynamic in the conversation. Finally, teams can apply diverse conceptual models and frameworks to ensure that people analyze an issue from multiple perspectives.

Outline

- I. If an organization has become saddled with a culture of polite talk, superficial congeniality, and low psychological safety, how can a leader spark a heightened level of candor? What specific tools can leaders employ to ignite a lively yet constructive scuffle?
 - A. Let's consider the story of Steve Caufield, the leader of an aerospace/defense firm that had to make an important strategic alliance decision.
 1. He invited a select set of executives and outside experts to a series of off-site meetings.
 2. He tried to create a highly diverse group, both in terms of expertise and personality.
 3. He divided them into 2 teams.
 4. He assigned 2 facilitators, one for each team. The facilitators were to lay out clear ground rules for how the discussion should take place.
 5. He chose not to attend the early meetings.
 6. He worked with the facilitators to establish 6 criteria for evaluating the alternatives. He also worked with them and others in the organization to identify 9 plausible alternatives.
 7. Each group analyzed the 9 alternatives. One group rated all 9 on 3 criteria, while the other team evaluated all 9 options based on 3 different criteria.
 8. Then Caufield joined the entire team to hear their evaluations and recommendations. He played the devil's advocate.
 - B. Caufield certainly "decided how to decide" quite effectively.
 1. In terms of composition, he chose the participants, invited outside experts, and chose the subgroup assignments.
 2. In terms of context, he chose to move it off-site, set the tone with his initial instructions to the group, and established clear ground rules for the deliberations.
 3. In terms of communication, he outlined the options and decision criteria and developed a system for the subgroups to evaluate the options based on 6 criteria.
 4. In terms of control, he did not attend the early meetings, but he provided a clear process roadmap for the group. He played the devil's advocate himself, and he designated others to serve as facilitators.
- II. Let's now consider some specific techniques in the leader's tool kit that one can use to stimulate conflict and debate in an organization. These techniques can be employed as one "decides how to decide."
 - A. You can ask your management team to role-play the competition.
 1. Professional football teams do this all the time, with their so-called scout teams.
 2. In one famous example, Patriots' coach Bill Belichick credited a player who didn't even take the field for much of the Patriots' defense's success against the Colts in the American Football Conference championship game in 2004. He credited the back-up quarterback, who had role-played Colts' star quarterback Peyton Manning all week in practice.
 3. Companies can do this as well. In my research, one company conducted extensive role-plays of their competitors.
 4. For another role-play approach, sometimes companies can role-play what it would be like if another set of senior executives were leading the firm.
 5. An example of this is when Intel leaders Andy Grove and Gordon Moore imagined in the early 1980s what it would be like if new leaders came to Intel. They used that simple role-play to help them make a very tough decision to exit the memory chip business.
 - B. You can employ mental simulation methods to stimulate conflict and debate.
 1. By that, we mean mechanisms and techniques for envisioning and mapping out multiple future scenarios.
 2. Royal Dutch Shell has pioneered scenario-planning techniques.
 3. Gary Klein has introduced the notion of premortem analysis as a way of envisioning future scenarios, particularly ones where current ideas and proposals do not work out well.

- C. You can introduce a simple set of models or frameworks that may be applied to a particular business problem and then designate people to use these different lenses during the decision-making process.
 - 1. Kevin Dougherty did this when he was leading Sun Life Financial's Canadian group insurance business unit.
 - 2. Back in 2000, he held an off-site where he wanted his team to consider how the Web was disrupting their business and how they could employ the Internet to build new business models.
 - 3. He had an outside expert describe 4 models for how other companies, in a wide array of industries, were building businesses using the Web.
 - 4. Then he divided his top leaders into 4 teams and had each team take one model. They had to create a new business proposal for Sun Life that was based on that model.
 - D. Finally, you can use various point-counterpoint methods to stimulate debate.
 - 1. Formally, scholars now describe the 2 point-counterpoint methods we discussed as dialectical inquiry and devil's advocacy.
 - 2. Polycom uses a version of this when they form red teams and blue teams to examine the pros and cons of making an acquisition.
 - 3. Electronic Arts builds this type of point-counterpoint dynamic right into their organizational structure. Two people lead each development team, each with a different role. It is purposefully stimulating creative tension.
 - 4. President Franklin D. Roosevelt purposefully used to create overlapping roles in his administration so as to create some point-counterpoint dynamics.
- III. Sometimes, despite the best intentions, these methods do not work effectively. There are dangerous side effects that emerge, or approaches that render these methods ineffective.
- A. Sometimes groups employ devil's advocacy, but they actually domesticate the dissenters. They engage "token" devil's advocates more to make everyone feel good about their approach, rather than to truly hear dissenting views.
 - B. Sometimes leaders create a system of communication whereby their subordinates are simply trying to persuade the person at the top, as opposed to actually debating one another.
 - C. Crowded agendas can diminish a debate's effectiveness. People do not have time to listen, digest what they have heard, and offer thoughtful critiques and responses.
 - D. We can allow people to become too entrenched in subgroups, such that they become quite polarized. They cannot come back together to synthesize what they have been doing separately.
 - E. Groups can strive for false precision. They become overly focused on minute details, as opposed to debating the big themes, ideas, and concepts.
- IV. To close, we should point out that practice makes perfect when it comes to stimulating conflict in organizations.
- A. Research shows that groups in experimental settings become more adept at debate, at methods such as dialectical inquiry and devil's advocacy, as they gain more experience with the processes.
 - B. In the real world, we see how some very effective leaders make conflict and debate a normal event—part of the usual routine of decision making, not a unique thing that happens only once per year at some off-site meeting.
 - C. As an example, consider Chuck Knight, long-time chairman and CEO of Emerson Electric. Knight designed that firm's strategic planning process as "confrontational by design." Everyone at the firm came to expect vigorous debate each and every day. It was a way of life at Emerson.
 - D. At Emerson, Knight enjoyed remarkable success. In Knight's 27-year tenure as CEO, Emerson's profits rose every single year.
 - E. General Electric had a similar approach when Jack Welch was CEO. Constructive conflict was even built in as one of the core values of the firm.
 - F. It reminds us of the wisdom of a famous quote by Aristotle: "We are what we repeatedly do. Excellence, then, is not an act, but a habit."

Suggested Reading:

Knight, *Performance without Compromise*.

Welch and Byrne, *Jack*.

Questions to Consider:

- 1. What techniques have you used that have helped stimulate a constructive debate within a team?
- 2. Why do some mechanisms for generating debate not function as expected?
- 3. Why does repeated practice help teams get better at managing conflict?

Lecture Twelve

Keeping Conflict Constructive

Scope: While stimulating debate is essential to good group decision making, unfortunately, not all conflict remains productive. Here, we will describe how leaders must manage the 2 forms of conflict—task-oriented and interpersonal—within their teams. Drawing on a case study about Sid Caesar’s famous comedic writing team, as well as cases about firms in healthcare and the nonprofit sector, we will look at how a leader can diagnose a debate to look for the warning signs of dysfunctional conflict. We will explore a number of techniques for leaders to curb interpersonal conflict in teams without compromising the level of task-oriented debate. In particular, we will examine what leaders can do before, during, and after a team decision-making process to manage conflict more productively.

Outline

- I. In the 1950s, comedian Sid Caesar starred in one of the most popular shows on television, *Your Show of Shows*.
 - A. The show had a famous writers’ room, filled with what would later become known as some of the greatest comedic writers of a generation. The writers included Mel Brooks, Larry Gelbart, Neil Simon, Woody Allen, and Carl Reiner.
 - B. They fought and argued. The ideas flowed freely.
 - C. The arguments got very loud. It was contentious.
 - D. However, the arguments were passionate yet productive. People channeled their emotions in such a way that enabled people to debate without tearing apart personal relationships.
 - E. How can leaders create this kind of atmosphere of productive creative tension?
- II. How can you diagnose whether a debate is becoming unproductive and dysfunctional?
 - A. You can ask the following questions.
 1. Have people stopped asking questions intended to gain a better understanding of others’ views?
 2. Has the group stopped searching for new information?
 3. Have individuals stopped revising their proposals based on the feedback and critiques offered by others?
 4. Has no one asked for help with the interpretation of ambiguous data?
 5. Have people begun to repeat the same arguments, only more stridently and loudly over time?
 6. Has no one admitted concerns about their own proposals recently?
 7. Have less outspoken individuals begun to withdraw from the discussions?
 - B. It’s important to understand that there are 2 forms of conflict.
 1. Cognitive conflict is task oriented. It’s debate about issues and ideas.
 2. Affective conflict is emotional and personal in nature. It’s about personality clashes, anger, and personal friction.
 3. The key is to stimulate the cognitive conflict while minimizing the affective conflict.
 4. Note that effective leaders channel the emotions; they do not try to eliminate them. It’s nearly impossible to eliminate emotions from a lively debate. In fact, emotions, at times, can be helpful.
- III. What can leaders do before the decision-making process to help stimulate constructive conflict?
 - A. Establish ground rules for how people should interact during the deliberations. Paul Levy did this when turned around the decision-making culture at the Beth Israel Deaconess Medical Center in 2002.
 - B. Clarify the role that each individual will play in the discussions.
 1. Kevin Dougherty at Sun Life assigned people to play roles that they usually did not play to get them to understand how their colleagues thought about problems.
 2. At the nonprofit New Leaders for New Schools, one of the firm’s leaders asked people in 2 subgroups to write up the arguments for why to go forward with the other side’s proposal.
 - C. Build mutual respect, particularly with regard to differences in the cognitive styles of each team member.
 1. It’s important for people to understand one another’s cognitive styles.
 2. Teams can and should spend some time discussing each member’s cognitive style, as the people at New Leaders for New Schools did.

- IV. What can leaders do during the decision-making process to help stimulate constructive conflict?
- A. Redirect people's attention and recast the situation in a different light.
 - 1. My colleague Amy Edmondson points out that NASA would have benefited from reframing the debate during the critical meeting on the eve of the launch of the *Challenger* space shuttle.
 - 2. Reframing requires asking curious, nonthreatening questions.
 - 3. The language people use in those questions matters a great deal.
 - B. Present ideas and data in novel ways so as to enhance understanding and spark new branches of discussion. Howard Gardner has argued that redescribing ideas by presenting data in a different manner can unlock impasses and get people to rethink their views.
 - C. Revisit basic facts and assumptions when the group appears to reach an impasse.
 - 1. One executive I interviewed discussed how he always brought people back to certain core facts and assumptions when the debate seemed to simply be at an impasse among a set of proposals.
 - 2. The idea is to find some points of common ground in those heated moments.
- V. What can leaders do after the decision-making process to help stimulate constructive conflict?
- A. Evaluate the process and develop lessons learned for application in the future. Conducting good after-action reviews can help improve a group's ability to manage conflict constructively.
 - B. Attend to damaged relationships and hurt feelings that may not have been apparent to all during the process. Emerson Electric's Chuck Knight always tried to repair any hurt feelings on the same day that a heated debate took place at a strategic planning meeting; he did not wait.
 - C. Ensure that people remember, and even celebrate, the effective ways in which they handled difficult disputes. Paul Levy did this at Beth Israel, building on the satisfaction of his people when they began to learn how to resolve conflicts more constructively. He celebrated good conflict management and shared that best practice with the entire organization.

Suggested Reading:

Boynton and Fischer, *Virtuoso Teams*.

Ury, *Getting Past No*.

Questions to Consider:

1. Why is it so difficult to mitigate affective conflict during a decision-making process?
2. What techniques for managing conflict have worked for you either personally or professionally?
3. What are some of the key ways that a team can work through an impasse?

Lecture Thirteen

Creativity and Brainstorming

Scope: One of the promises of employing teams is not only that they can make good decisions, but also that bringing together diverse people can lead to more innovative and creative solutions to complex problems. In this lecture, we take a close look at IDEO, one of the world's leading product-design firms. How has this firm consistently designed innovative, market-leading products for companies in a wide variety of industries? What are the critical components of their highly creative yet disciplined team process for innovation and new product development? How do they conduct group brainstorming processes so effectively? We will take a close look at how IDEO once tried to design a new product in one week. That close-up enables us to see the IDEO process in action and to understand how the firm consistently delivers on its promise of creativity and innovation. We will pay special attention to the role that the team leaders play in nurturing creativity while still remaining disciplined so as to meet schedules and deadlines.

Outline

- I. Let's begin by considering the case of Polaroid.
 - A. Polaroid used to be the dominant player in the instant camera market.
 - B. The company had tremendous technical capabilities.
 - C. Polaroid also had a strong "razors and blades" business model (i.e., they sold the cameras at a low margin but made high margins on the replacement film).
 - D. The firm invested in research and development in digital camera technology all the way back in the 1980s.
 - E. However, they were very late in commercializing that technology.
 - F. Digital cameras completely wiped out the company, as instant cameras became extinct.
 - G. According to scholars Giovanni Gavetti and Mary Tripsas, Polaroid managers clung to their "razors and blades" business model. They were locked into that old mental model, and they could not embrace a totally different economic model for digital cameras.
 - H. The point is that we have to be careful about powerful mental models that block creative and innovative ideas from gaining support in organizations.
 - I. In this lecture, we'll consider how to break out of old mental models and how to come up with creative new solutions.
- II. Let's begin with a simple exercise where you reflect on the topic of creativity and your experiences with it.
 - A. Think of a time at work when you and your team were unusually creative or innovative. Describe the task, the setting, and the associated conditions. What do they suggest about the most important facilitators of creativity and innovation?
 - B. Think of a time at work when you and your team were frustrated in your efforts to be creative or innovative. Describe the task, the setting, and the associated conditions. What do they suggest about the most important barriers to creativity and innovation?
 - C. Keep your answers in mind as we take a look at how one firm fosters a highly creative culture.
- III. Let's take a look at IDEO, one of the world's leading product-design firms.
 - A. Several years ago, ABC News produced an interesting program showing IDEO trying to design a new shopping cart in just 5 days.
 - B. Many case studies have also been written about the company.
 - C. In addition, one of the founders has written a book about how IDEO works.
 - D. Here are some key steps in the IDEO creative process.
 1. Everyone at the firm becomes an ethnographer. They are like Margaret Mead, the anthropologist, who was a pioneer in ethnographic research. By that, I mean that they go out and directly observe how people are using particular products in natural settings. They are not just asking people what they do or what they like.
 2. As it turns out, people do not always do what they say they do. Thus, observation is critical to truly understanding people's needs, habits, and so on.
 3. Employees share what they have learned from their data gathering in a wide-open session.
 4. They vote on ideas using Post-it notes at times, to help narrow down the long list of concepts that come from a brainstorming session.

5. They practice deferred judgment during brainstorming sessions, holding back on critiquing one another's ideas until they have lots of views on the table.
 6. The leaders intervene periodically to shape the process and to keep the team moving.
 7. They engage in rapid prototyping—an essential part of the creative process.
 8. They even build specialized prototypes that focus on one particular product dimension to help drive innovative ideas.
 9. They have subgroups work in parallel at times to create divergent thinking and to speed up the design process.
 10. They take their prototypes out to the field to gather lots of feedback.
- E. IDEO's culture and organizational context are conducive to creativity.
1. They have a work environment that is fun and encourages free-flowing ideas.
 2. They do not have much formal hierarchy.
 3. The workplace has few symbols of status.
 4. The ground rules for how to have a productive brainstorming session are written on the walls as reminders.
 5. There are materials everywhere so that people can think visually and so that crude prototypes can be built.
 6. They keep old failures around, to remind people that you have to take risks to be creative and that you have accept some rate of failure.
- F. The leaders play an interesting role at IDEO.
1. They do not tell people what to design.
 2. They guide and shape the process, and they intervene to keep it on track.
 3. Team leaders are chosen carefully, with an emphasis on communication and interpersonal skills rather than seniority or technical capabilities.
 4. The leaders openly encourage people to disagree with them.
- IV. Stepping back, we can identify 3 important steps in the creative process.
- A. You must use experts and expert knowledge in an appropriate manner. There are many examples of how experts can be wrong, particularly when the external environment suddenly changes or when the environment is turbulent for a long period of time.
 - B. You have to keep surfacing and testing underlying assumptions and orthodoxies. You have to wipe away old assumptions and beliefs, and unlearn old ways of working, before you can creatively generate new ideas.
 - C. You have to frame problems in a way that does not constrict the debate or the range of solutions that will be considered. You have to use multiple frames on the same issue. For the shopping cart, IDEO identified 4 different areas of focus, and they explored them all.
- V. In conclusion, creativity requires a willingness to focus intently on avoiding premature convergence on a single idea. You have to defer judgment and generate many diverse ideas. You also have to be willing to experiment and to fail.
- A. Willingness to fail—and encouraging people to make useful and intelligent mistakes—is critical.
 - B. To close, we'll tell the story of Build-A-Bear to see how that firm makes it OK to fail, as long as people are experimenting and learning intelligently.

Suggested Reading:

Clark with Joyner, *The Bear Necessities of Business*.

Kelley, *The Art of Innovation*.

Questions to Consider:

1. Why do we need to make it OK to fail in organizations?
2. What aspects of a work environment help stimulate creative brainstorming?
3. What are the key barriers to creative problem solving in organizations?

Lecture Fourteen

The Curious Inability to Decide

Scope: Some groups have plenty of dialogue and debate, even bursts of highly creative thinking, yet they can never come to a decision that they can put into action. They experience chronic indecision. Debates drag on endlessly, or they seemingly have arrived at a decision, only to watch it unravel shortly after the team disperses to begin the implementation process. In this lecture, we draw on case studies about IBM, as well as the Beth Israel Deaconess Medical Center in Boston, to understand the dynamics of what Beth Israel Deaconess CEO Paul Levy calls the “curious inability to decide.” Specifically, we will examine 3 modes of indecision in teams: the culture of no, the culture of yes, and the culture of maybe.

Outline

- I. Many leaders and companies have a persistent problem with indecision.
 - A. Paul Levy faced this problem when he joined Beth Israel Deaconess.
 - 1. He diagnosed the situation as “the curious inability to decide.”
 - 2. Indecision had prevented the effective integration of a prior merger, which left the hospital in serious financial trouble when Levy took over.
 - B. Indecision is not simply a trait of particular leaders; it’s often a trait of organizational cultures.
 - 1. Culture is defined as the taken-for-granted assumptions of how things work in an organization, of how members approach and think about problems.
 - 2. With regard to indecision, it often arises from certain dysfunctional patterns of behavior that become ingrained over time within certain cultures.
 - C. There are 3 types of problematic cultures, which we call the culture of no, the culture of yes, and the culture of maybe.
- II. The “culture of no” is a phrase coined by Lou Gerstner when he took over as CEO of IBM.
 - A. Gerstner faced a tremendous challenge.
 - 1. The company lost more than \$8 billion in 1993.
 - 2. Mainframe revenues, the company’s mainstay, had declined precipitously.
 - B. One cultural problem was that the powerful heads of various units at IBM could effectively veto major initiatives, even as lone dissenters.
 - 1. IBM even had a name for this: They called it “issuing a nonconcur.”
 - 2. Gerstner discovered that IBM managers had actually designed a formal nonconcur system into the company’s strategic planning process.
 - 3. In a rather incredible memo that Gerstner uncovered, an executive went so far as to ask each business unit to appoint a “nonconcur coordinator” who would be responsible for blocking projects and proposals that would conflict with the division’s goals and interests.
 - C. Sometimes, a culture of no arises in an organization because meetings have become places where people strive to deliver “gotchas”
 - 1. Jeffrey Pfeffer and Robert Sutton have written about this problem, which they describe as the tendency for “smart talk” to prevail in some organizations.
 - 2. By that, they mean that some organizations reward those who are great at dissecting others’ ideas, even if they offer no alternatives themselves. You get rewarded for good “gotcha” moments, as if you were still in an MBA classroom.
 - D. It’s important to note that there is a key difference between the effective use of devil’s advocates versus the culture of no.
 - 1. Dissenters in a culture like IBM’s back before Gerstner were simply trying to tear down or block proposals and ideas. They were trying to shut down a particular avenue for the firm.
 - 2. Effective devil’s advocates are putting forth critiques in an attempt to ultimately strengthen a proposal, or to open up a discussion by helping to generate lots of new options.
- III. Paul Levy faced a rather different problem when he took over at the Beth Israel Deaconess Medical Center in Boston. He faced what we call a culture of yes.
 - A. In senior management meetings at Beth Israel Deaconess, people tended to stay silent if they disagreed with a proposal on the table. They seemed to indicate that they endorsed the proposal, at least by their silence.

- B. Then, however, they would later express their disagreement, lobby to overturn the choice, or try to undermine the implementation of the plans with which they disagreed.
 - C. You end up with a false consensus that emerges at meetings. You think everyone is behind a plan, when they are actually not.
 - D. In these kinds of situations, you have to remember that silence does not mean assent. When people are not contributing to a discussion, they may disagree strongly but not wish to voice their dissent in the meeting.
- IV. A culture of maybe entails management teams that strongly desire to gather as much information as possible, so much so that they get caught in “analysis paralysis.”
- A. Analysis paralysis is when you constantly delay decision and action because you think just a bit more information and analysis might clarify your choice.
 - B. The culture of maybe afflicts people and organizations who have a hard time dealing with ambiguity, or who engage in conflict avoidance when someone disagrees with a majority position of the group.
 - C. When we think about information search, we have to remember that there is always some theoretically optimal amount of data that we should gather.
 1. Think of it this way: The cost of gathering information tends to rise at an increasing rate. That is, when you already have 90% of available data on an issue, the incremental cost of gathering additional information is much higher than when you only have 10% of the available data.
 2. Meanwhile, the benefit of gathering additional information tends to exhibit diminishing returns. In other words, when you already have 90% of the available data, the incremental benefit of gathering additional bits of information tends to be much smaller than when you have only 10% of the available data.
 3. Thus, what you ideally search for is the point where there is the biggest gap between the total benefits of gathering data and the total costs of gathering data. Put another way, you want to gather additional information as long as the incremental benefit exceeds the incremental cost.
 4. Of course, you cannot calculate these costs and benefits as a leader. However, you can make judgments as to when you are not garnering additional value by searching for additional information.
- V. When leaders face a chronic problem of indecision, they often look for ways to accelerate decision making in the organization. They seek shortcuts.
- A. They might grasp for analogies more frequently and leave themselves vulnerable to flawed analogical reasoning.
 - B. They might try to adopt some rules of thumb that have become conventional wisdom in their industry or organization.
 - C. They might imitate what their competitors are doing, even though simply copying your rivals is unlikely to lead to competitive advantage.
- VI. Where do indecisive cultures originate?
- A. They often originate from past success. Some variant of what appears to be dysfunctional behavior actually worked for the firm in the past.
 - B. This appears to have been the case at Digital Equipment Corporation under Ken Olsen.
 - C. Certain behaviors proved effective during the remarkable rise of that firm, but then the firm became rigid.
 - D. When the environment shifted, the firm could not adapt.

Suggested Reading:

Gerstner, *Who Says Elephants Can't Dance?*

Schein, *DEC Is Dead, Long Live DEC.*

Questions to Consider:

1. Why do some groups find it difficult to bring debates and deliberations to closure?
2. Why do we often assume that silence equals assent in group discussions?
3. Why does analysis paralysis occur in decision-making processes?

Lecture Fifteen

Procedural Justice

Scope: Noel Tichy and Dave Ulrich once wrote, “CEOs tend to overlook the lesson Moses learned several thousand years ago—namely, getting the Ten Commandments written down and communicated is the easy part; getting them implemented is the challenge.” In short, to be effective, teams need to be able to make good decisions and then implement them successfully. To do so, teams need to build consensus among team members—defined not as unanimity, but instead as a combination of commitment and shared understanding. How do teams achieve consensus? One critical element is striving for processes that are perceived as fair and just by all members. In this lecture, drawing on case studies about Daimler Chrysler and a leading defense firm, we explain the theory of procedural justice and how it can be applied to improve group decision making. We try to answer the following questions: What is fair process? Why do perceptions of procedural fairness matter? How does one create and lead a fair process? How does one reconcile the notion of fair process with the idea that good decision making involves constructive conflict?

Outline

- I. Leaders not only have to make good decisions; they also have to be able to implement them effectively.
 - A. The process we use to make decisions often has a great impact on whether we will be able to implement them successfully.
 1. Consensus is the key to smooth implementation.
 2. Consensus does not mean unanimity.
 3. Consensus, as defined by scholars Bill Wooldridge and Steven Floyd, is the combination of commitment and shared understanding.
 4. You must have both. Commitment without shared understanding just equals blind devotion. Understanding without commitment means you won’t get the dedication and cooperation you need.
 - B. The problem is that the more vigorous debate you induce, the harder it may be to arrive at consensus.
 1. Thus, you have to be sure to keep conflict constructive, as we have discussed.
 2. However, you must do more than that. You must ensure that the decision process is both fair and legitimate.
- II. Let’s consider Mark Ager’s decision regarding a strategic alliance at his firm.
 - A. Ager worked at a defense firm that had come up with an interesting software application.
 - B. The firm did not have any commercial capabilities.
 - C. Ager decided to find a partner to help his firm bring the product to market.
 - D. He researched a group of partners and then chose one he preferred.
 - E. He held a series of meetings at which he put forth all these options, while all the time he knew which one he wanted to execute.
 - F. Others saw through the charade. They saw that the decision was preordained.
 - G. Even though most agreed with his choice, they were disenchanted because they did not like the way he had conducted the decision process.
 - H. In sum, people care about process, not just outcomes, when it comes to decision making. People want the process to be fair and legitimate.
- III. What is procedural justice, or fair process?
 - A. Legal scholars first pioneered this concept.
 1. They showed that people did not simply care about the verdict in a legal proceeding.
 2. They also cared about the process. They wanted it to be just as well.
 - B. Tom Tyler has argued that fair processes provide a “cushion of support” when you make decisions that are not necessarily popular with all those involved.
 1. Tyler points to an example from legal research on the fairness of certain arbitration procedures.
 2. People’s satisfaction with legal proceedings didn’t vary much between unfair and fair processes if they had won the verdict.
 3. However, those who lost the verdict were much happier in the fair process condition. They weren’t as happy as those who won the verdict, but the gap was much smaller than in the unfair process.
 4. Thus, the argument is that leading a fair process will help you get people on board with your decision even if it’s not popular.

- C. Fair process matters in management as well, not simply in legal matters. Fair process helps to build consensus, which in turn fosters effective implementation.
 1. People do not want to see a “charade of consultation” like Mark Ager conducted.
 2. In a charade of consultation, people develop alternatives, make a decision, consult with their team, steer the discussion toward their preferred choice, and then announce the decision that they had made at the outset.
- D. What are the components of fair process?
 1. You must give people ample opportunity to express their views—and to discuss how and why they disagree with other group members.
 2. People must feel that the decision-making process has been transparent (i.e., the deliberations have been relatively free of behind-the-scenes maneuvering).
 3. They must believe that the leader listened carefully to them and considered their views thoughtfully and seriously before making a decision.
 4. They must perceive that they had a genuine opportunity to influence the leader’s final decision.
 5. They have to have a clear understanding of the rationale for the final decision.
- E. Put another way, fair process means a leader demonstrating genuine consideration of others’ views. To do that, leaders should do the following.
 1. Provide a process road map at the outset of the decision process.
 2. Reinforce an open mind-set.
 3. Engage in active listening.
 4. Explain their decision rationale.
 5. Explain how others’ inputs were employed.
 6. Express appreciation for everyone’s input.
- F. There are some good examples of leaders who practiced fair process effectively.
 1. One example is Andy Grove at Intel.
 2. Another example is Paul Levy at the Beth Israel Deaconess Medical Center.
- G. Some people complain that this simply will take too much time, but that is not the case. Gene Kranz’s leadership during the *Apollo 13* crisis demonstrates that fair process doesn’t have to take a great deal of time.

IV. What is procedural legitimacy?

- A. Let’s take the example of the Daimler decision to purchase Chrysler. Evidence suggests that the Daimler CEO clearly led a preordained process, where he went through a series of options with his team, while he clearly steered it toward Chrysler all along.
- B. Procedural legitimacy refers to the notion that a decision process is perceived to be consistent with certain socially acceptable and desirable norms of behavior.
- C. What types of actions in the decision process convey procedural legitimacy?
 1. You can gather extensive amounts of data.
 2. You can present many different alternatives.
 3. You can conduct a great deal of formal analysis.
 4. You can bring in outside experts and consultants.
- D. The challenge is that many efforts to promote legitimacy may actually diminish legitimacy if people perceive the actions as purely symbolic (i.e., if the decision is preordained).
 1. Sometimes people just gather lots of information and present many options because they want to make it seem as though they were very thorough and comprehensive, so as to build legitimacy.
 2. However, their minds may already be made up, as with Mark Ager.
- E. How can you preserve procedural legitimacy?
 1. Share information equally with all participants.
 2. Avoid token alternatives.
 3. Separate advocacy from analysis.
- F. It’s important that leaders test for alignment between their perceptions of the process and the participants’ perceptions. At times, leaders think the process is fair and legitimate, but their team members have very different perceptions. This can be quite problematic.

V. How do we reconcile a desire for conflict in the decision process with a need for procedural justice and legitimacy?

- A. The two are not at odds with one another.
- B. You will enhance perceptions of procedural justice and legitimacy if you give your team members an opportunity to not only air their views, but also debate them with others in an open and transparent manner.

Suggested Reading:

Lind and Tyler, *The Social Psychology of Procedural Justice*.

Thibault and Walker, *Procedural Justice*.

Questions to Consider:

1. Why does fair process matter?
2. What can leaders do to enhance perceptions of procedural justice?
3. How can efforts to enhance procedural legitimacy become problematic?

Lecture Sixteen

Achieving Closure through Small Wins

Scope: How does a group move finally to closure at the end of a decision-making process? In this lecture, we describe how effective teams employ an iterative process of divergence and convergence in their thinking, drawing on Karl Weick's theory of small wins. We show how groups do not simply engage in brainstorming and creative thinking and then shift to a convergent mode of thinking later on in the process. Instead, effective teams adopt a small wins approach, finding intermediate points of agreement amid a process of healthy debate and divergent thinking. This lecture explores the issue of achieving closure through a small wins approach by studying cases on General Eisenhower and the D-Day invasion, as well as the 1983 Social Security reform and CEO Jamie Houghton's leadership at Corning.

Outline

- I. Let's begin with a story about Presidents Harry Truman and Dwight Eisenhower.
 - A. Richard Neustadt reports a great story about Harry Truman. Apparently, as he left office, he expressed a belief that his successor, Dwight Eisenhower, would become very frustrated because he could not issue orders in the same way that he had as a general.
 1. Truman had experienced how hard it was to get things done in a government bureaucracy.
 2. He learned that even if a president issued a command, it did not mean that various departments of the government would implement it as he wished.
 - B. As it turned out, though, Eisenhower was quite adept at making decisions, without necessarily relying on an autocratic style of giving orders.
 1. Eisenhower had been an interesting, and not necessarily conventional, choice as supreme allied commander of the mission to liberate Western Europe during World War II.
 2. He was not considered a great military strategist, nor had he had the success in the battlefield of other American and British commanders.
 3. However, Eisenhower knew how to pull a team together, particularly one with many strong personalities. He could listen to diverse views, build commitment and shared understanding, and then get to closure efficiently.
 4. Eisenhower was effective at leading fair and legitimate decision processes.
 5. Eisenhower got to closure through a step-by-step process. He was always inducing debate but then seeking common ground intermittently. He was seeking agreement on small points amid larger disagreements.
- II. The traditional prescriptive model of decision making suggests that we should go through a linear progression of divergence and then convergence.
 - A. The model suggests that you should diverge in the early stages of a decision process, gathering as many diverse perspectives and views as possible.
 - B. Then you should try to converge, narrowing down the options and coming to a decision.
 - C. However, my research suggests that the most effective way to achieve closure is not to pursue such a linear process.
 1. My research suggests that effective leaders, such as Eisenhower, pursue an iterative process of divergence and convergence.
 2. They stimulate debate, but they are always on the lookout for areas of common ground.
 3. Those moments of agreement help the group avoid extreme polarization and dysfunctional conflict, and they help build momentum toward closure.
 4. The idea is that leaders should pursue small wins throughout the decision process, rather than waiting to converge toward the end of the process.
 5. Andrew Venton and his management team demonstrate an effective process of small wins, ultimately leading to efficient closure.
- III. Why are small wins important?
 - A. In a classic article, Karl Weick argued that small wins are the key to solving apparently intractable problems.
 - B. Small wins bring new allies together and give people proof that they can reconcile differences constructively.
 - C. One agreement serves as a catalyst for more productive debates and further agreements down the line.
 - D. Two obstacles are overcome by a small wins approach: One is cognitive, and the other is socioemotional in nature.
 - E. The cognitive obstacle in many complex decision-making situations is that individuals experience information overload. Ambiguity and complexity become overwhelming.

- F. The socioemotional obstacle is that many decision makers experience frustration, stress, and personal friction during complex situations.
 - G. Weick also points out that we match our capabilities to situations; if we sense a mismatch, then we get very anxious, and that interferes with our ability to solve problems.
 - H. Breaking large, complex problems into smaller parts and then gaining small wins on those parts can be an effective way of dealing with these cognitive and socioemotional obstacles.
- IV. The 1983 Social Security reform is an example of the effective use of small wins.
- A. Social Security was in crisis in that year.
 - B. President Reagan and Congress had not been able to resolve the situation. A bipartisan commission failed as well.
 - C. Finally, a group came together to try to deal with the issue. It consisted of some commission members and some White House officials. The group reported to President Reagan and House Speaker Tip O’Neill. The group was known as the “Gang of Nine.”
 - 1. The group definitely employed a small wins approach, gaining a series of intermediate agreements on the way to an ultimate decision.
 - 2. They began by agreeing on certain facts and assumptions.
 - 3. They agreed on the size of the problem.
 - 4. They also agreed on criteria that they would use to judge the options.
 - 5. Then they gradually agreed on a series of proposals that would each tackle part of the overall problem.
- V. There are 2 types of small wins that you must strive for if you wish to achieve closure in an efficient manner.
- A. There are process-oriented small wins. These involve goals and objectives, assumptions, and decision criteria.
 - B. There are outcome-oriented small wins. These involve the way you take alternatives off the table gradually, seek option-oriented agreements at times, and adopt contingency plans.
 - C. The 1983 Social Security reform offers examples of both kinds of small wins.
- VI. At some point, you must still find a mechanism for shifting into decision mode if you want to achieve closure in a timely fashion. You have to be able to get your team to see that the time for debate is over.
- A. There are 3 keys to shifting into decision mode effectively.
 - 1. First, leaders can develop a clear set of expectations regarding how the final decision will be made.
 - 2. Second, they can develop a language system that helps them communicate how their role in a decision process will change at a critical juncture in order to achieve timely closure.
 - 3. Finally, leaders can build a relationship with a confidante who can not only offer sound advice but also bolster the leader’s confidence when he or she becomes tepid and overly risk averse.
 - B. Jamie Houghton, former CEO of Corning, had a unique language system for signaling to his management team that it was time to move to final closure on a decision.
 - C. The final important point is for leaders to work hard to sustain closure after it is achieved.
 - 1. Sometimes individuals will try to unravel decisions that have already been made.
 - 2. Leaders need to hold people accountable for decisions in which they have taken part and not allow them to undermine a group’s choice during the implementation process.
 - 3. Leaders must work hard to build and sustain the trust of their colleagues, because in the end, that is the most important attribute that they can use to help achieve and sustain closure.

Suggested Reading:

Ambrose, *The Supreme Commander*.

Nadler, Spencer, and associates, *Leading Executive Teams*.

Questions to Consider:

1. Why is the psychology of small wins so important to effective decision making?
2. Why can we not simply strive for divergence followed by convergence in a decision process?
3. What should a leader do to help a group move smoothly to closure?

Lecture Seventeen

Normal Accident Theory

Scope: In this lecture, we begin our shift to examining decision making from a broader organizational or systemic perspective. In this lecture and the next one, we set out 2 perspectives on how the structure and culture of organizations shapes individual and team decision making. First, we look at a case study of a catastrophe, the Three Mile Island accident, and try to explain what went wrong. To begin, we examine Charles Perrow's normal accident theory, his idea of how the structural properties of some organizational systems make failures inevitable. Specifically, we look at how interactive complexity and tight coupling are 2 critical dimensions of organizational systems that tend to raise the risk of failure. We also examine how most large-scale failures do not arise from a single decision gone astray but rather from a chain of events. In other words, small decision failures tend to cascade to create large-scale failures.

Outline

- I. In this final module of the course, we shift to a focus on the organizational unit of analysis.
 - A. In our first module, we focused on individual decision making as our unit of analysis. We largely discussed cognitive issues—things going on in the minds of individuals.
 - B. In our second module, we focused on group dynamics.
 - C. In this third module, we focus on the organizational unit of analysis.
 1. We begin by looking at 2 different perspectives on organizational decision-making failures, one structural and the other behavioral. The structural perspective is called normal accident theory—the topic of our first lecture in this module.
 2. Then we examine several theories that attempt to bring together organizational analysis with cognitive and group-dynamics perspectives. These “multiple lenses” approaches can be very powerful.
 3. Using a multiple-perspectives approach, we look at the particularly challenging problem of how organizations make decisions in the face of ambiguous threats.
 4. Finally, we look at how organizations can make better decisions in high-risk/high-ambiguity environments.
 5. In our closing lecture, we will try to wrap up the main concepts and ideas from the course.
- II. Charles Perrow developed normal accident theory to explain how decision failures happen in complex, high-risk organizations.
 - A. Perrow examined the structural characteristics of organizational systems that involve high-risk technologies such as nuclear power. Most famously, he studied the Three Mile Island nuclear power plant accident that occurred several decades ago.
 1. Perrow's conceptual framework classifies all high-risk systems along 2 dimensions: interactive complexity and coupling.
 2. Interactions within a system may be simple and linear, or complex and nonlinear.
 3. Coupling may be either loose or tight.
 4. Perrow argues that systems with high levels of interactive complexity and tight coupling are especially vulnerable to catastrophic failures.
 5. In fact, he argues that accidents are inevitable in these situations; certain failures constitute “normal accidents.”
 - B. Interactive complexity refers to the extent to which different elements of a system interact in ways that are unexpected and difficult to perceive or comprehend.
 1. Often, these interactions among elements of the system are not entirely visible to the people working in the organization.
 2. Simple, linear interactions characterize systems such as a basic manufacturing assembly line. In that instance, the failure of a particular piece of equipment typically has a direct, visible impact on the next station along the line.
 3. The operations of a nuclear power plant do not follow a simple linear process; instead, they are characterized by complex and nonlinear interactions among various subsystems.
 4. The failure of one component can have multiple unanticipated effects on various subsystems, making it difficult for an operator to diagnose the symptoms of a developing catastrophe.
 - C. Tight coupling exists if different elements of an organizational system are highly interdependent and closely linked to one another, such that a change in one area quickly triggers changes in other aspects of the system.
 1. Tightly coupled systems have 4 attributes: time-dependent processes, a fairly rigid sequence of activities, one dominant path to achieving the goal, and very little slack.

2. When such rigidity exists within an organization, with few buffers among the various parts, small problems can cascade quickly throughout the system, leading to catastrophe.
 3. Loose coupling exists when subsystems are not as tightly integrated, such that small errors in one area can be isolated or absorbed without affecting other subsystems.
- D.** Perrow points out that engineers often build redundancies into complex systems to try to protect against catastrophic failures.
1. Unfortunately, such redundancies may actually add to the complexity and rigidity of the system, making it more vulnerable to failure in some circumstances.
 2. Thus, in the end, Perrow comes to the difficult conclusion that some accidents are simply inevitable in systems that exhibit interactive complexity and tight coupling.
- III.** There are some limitations and critiques of normal accident theory as a way to explain organizational decision-making failures.
- A.** First, many scholars and practitioners find the theory frustrating, in that it does not move us toward an understanding of how to prevent catastrophic accidents. It appears to have little prescriptive value.
1. Some have argued that we should be exploring ways to reduce interactive complexity and tight coupling in organizations.
 2. That is possible to some extent, but not completely.
 3. Toyota clearly is an example of a company that has tried to do this, as are many hospitals that are trying to reduce the likelihood of tragic medical accidents.
- B.** A second major criticism refers to the problems inherent in the classification scheme itself.
1. The 2 system dimensions articulated by Perrow are useful in helping us understand the vulnerability of organizations.
 2. However, one cannot easily classify organizations in his 2×2 matrix.
 3. For instance, where does commercial aviation fit?
- IV.** Despite the limitations, Perrow's theory, along with subsequent work by others, has helped us understand how complex organizational decision-making failures happen.
- A.** We have come to learn that most of these failures do not trace back to one single cause.
- B.** They involve a chain of decision failures—a series of small errors that often build upon one other in a cascading effect.
- C.** In many situations, one seemingly small decision failure can snowball, leading to a whole series of other errors that ultimately leads to a catastrophic failure.
- D.** Psychologist James Reason has done some interesting work in this area. He has crafted the famous “Swiss cheese analogy” for thinking about how organizations can limit the risk of these catastrophic decision failures.
1. He describes an organization's layers of defense or protection against accidents as slices of cheese, with the holes in the block of cheese representing the weaknesses in those defenses.
 2. In most instances, the holes in a block of Swiss cheese do not line up perfectly, such that one could look through a hole on one side and see through to the other side.
 3. In other words, a small error may occur, but one of the layers of defense catches it before it cascades throughout the system.
 4. However, in some cases, the holes become completely aligned, such that an error can traverse the block (i.e., cascade quickly through the organizational system).
 5. Reason argues that we should try to find ways to reduce the holes (i.e., find the weaknesses in our organizational systems) as well as add layers (build more mechanisms for catching small errors). We shall discuss this more in upcoming lectures.

Suggested Reading:

Perrow, *Normal Accidents*.

Turner, *Man-Made Disasters*.

Questions to Consider:

1. Are some failures inevitable?
2. What causes tight coupling to arise in organizations?
3. What are the limitations of complex systems theory?

Lecture Eighteen

Normalizing Deviance

Scope: From Perrow's structural perspective, we shift to a behavioral perspective on why large-scale organizational failures occur. Here, we examine the *Challenger* space shuttle accident, to understand how risky behavior and risky decision making unfolded at NASA over many years leading up to the *Challenger* explosion. We explain Diane Vaughan's theory of the normalization of deviance, which explains how NASA leaders gradually accepted abnormal results and increasingly made riskier decisions over time. In this case, we see the powerful effects of organizational culture on managerial behavior and decision making. In this lecture, we argue that failures are far from inevitable; instead, leaders have the ability to shape the culture that in turn affects the way decisions are made in an organization by people at all levels.

Outline

- I. We now shift to a more behavioral perspective on understanding catastrophic organizational decision-making failures.
 - A. Our primary case study here is the *Challenger* space shuttle accident of 1986, though we'll also touch on the collapse of Enron as well.
 - B. We'll examine how some researchers have focused much more attention on behavior, rather than solely focusing on the structural dimensions of organizational systems.
 - C. They also have focused much more on the historical evolution of catastrophic accidents. They do not only examine the momentous decision that might have immediately preceded a tragedy (such as the critical eve-of-launch meeting that took place prior to the *Challenger* accident), nor do they focus exclusively on the immediate chain of events that led to a failure.
 1. Instead, these scholars examine the gradual development of norms, beliefs, and attitudes that contribute to unsafe action. They look at how culture and history shape behavior, leading to risky and faulty decision making.
 2. They try to understand the history of decisions that were made in an organization, as well as the danger signs that may have been downplayed or misinterpreted over time.
 3. This approach to studying failures can be traced back to Barry Turner's seminal book, *Man-Made Disasters*, published in 1978.
 4. He argues that many catastrophic failures are characterized by incubation periods that stretched over many years, not days or hours.
 5. He makes a strong case for how catastrophic accidents were processes, not events. They did not simply happen at a point in time; they unfolded in a gradual accumulation of actions, decisions, and interpretations by many actors within an organization.
- II. After the *Challenger* space shuttle accident, many people sought to study the faulty decisions that were made.
 - A. After that accident, many people took a simple group-dynamics perspective on the tragedy, focusing on the team that met on the eve of the launch to discuss whether to postpone the launch.
 1. During this meeting, some engineers expressed concern about the temperatures expected on the morning of the launch.
 2. Roger Boisjoly was the key engineer expressing concerns.
 3. He believed that cold temperatures could lead to substantial O-ring erosion on the solid rocket boosters.
 4. That erosion could lead to a catastrophic accident during launch, due to a leaking of hot gases, if the O-rings eroded substantially.
 5. The dynamics of the meeting are fascinating.
 6. Boisjoly found himself lacking sufficient data to prove his case. He had some data, but he also was relying on his intuition to come to the conclusion that cold temperatures were problematic.
 7. Without sufficient data, he could not persuade top managers.
 8. Some analysts have suggested that groupthink occurred during the meeting.
 9. Others have argued that the dissenting views did surface, and debate did occur. Thus, it was not groupthink. Instead, they focus on the fact that the group did not engage in effective collaborative learning behavior.
 10. This perspective suggests that the team did not have a constructive dialogue and did not adopt an inquisitive, collaborative learning orientation. Thus, they failed to surface the data that would have clearly suggested a delay was necessary.
 - B. Diane Vaughan suggested an alternative explanation. She did not focus simply on the group dynamics during that critical meeting.
 1. She looked back at the history of NASA and at the culture and systems of the organization.

2. She tried to understand how behavior had evolved over time, since the O-rings were a problem that had cropped up repeatedly over the years.
3. She wanted to understand how history and culture shaped behavior and decision making at the meeting.
4. In other words, Vaughan wanted to know how organizational context shaped behavior; those decisions did not happen in a vacuum.

III. In her groundbreaking book on the accident, Vaughan explained her theory of the normalization of deviance.

- A. She argued that engineers and managers moved down a dangerous slippery slope in a gradual evolutionary process that took place over many years.
- B. At first, NASA officials did not expect or predict O-ring erosion on shuttle flights. It was not in their original designs.
- C. When a small amount of erosion was discovered on an early, successful shuttle mission, engineers considered it an anomaly.
- D. Then it happened again. Gradually, the unexpected became the expected. O-ring erosion began to occur regularly.
- E. Engineers rationalized that sufficient redundancy existed to ensure no safety-of-flight risk. Small deviations became taken for granted.
- F. Over time, however, deviations from the original specification grew. Engineers and managers expanded their view of what constituted acceptable risk.
- G. Vaughan recounted to me that as the years unfolded, the “unexpected became the expected became the accepted.”
- H. The launch decision, therefore, could only be understood in the context of this long pattern of decisions, during which a gradual normalization of deviance took place. In short, history matters a great deal. Decisions and catastrophic failures cannot be understood without examining their historical context.
- I. A key point Vaughan argued is that the culture shaped this evolutionary process.
 1. NASA operated under tremendous schedule pressure throughout the years.
 2. It had a culture that emphasized a distinction between engineers and managers.
 3. NASA had cast space flight as routine, and that mind-set permeated the culture.
 4. NASA always operated under the influence of their perceptions of the political culture in which they existed.
 5. Thus, the culture shaped, and even encouraged, the normalization of deviance over time.
- J. Vaughan’s arguments were so compelling that she was interviewed by the investigation board that studied the *Columbia* accident in 2003.
 1. They ultimately asked her to join them in writing their report on the *Columbia* accident.
 2. The *Columbia* board found that the cultural problems identified by Vaughan continued to exist at NASA in 2003.
 3. Vaughan told the committee that NASA had never even called her to discuss her book. They had lost a valuable learning opportunity after the *Challenger* accident.
 4. There is a lesson there for many organizations that don’t learn from large-scale failures.

IV. Does this normalization of deviance affect decision making in other organizations? Yes, there is some evidence that this occurred at Enron in the years leading up to its collapse.

- A. We see a situation where managers gradually took on more risk, moving down the slippery slope.
- B. They pushed for aggressive growth, and as they did, they had to take more and more risks to meet the growth expectations of top management and Wall Street investors.
- C. They normalized the risks over time.
- D. That normalization can be seen in how they moved further and further away from their core business in natural gas, as we noted earlier in our discussion of reasoning by analogy.
- E. Did Enron step over the line all at once? Can we find one decision that led to its collapse? No, we have to look at how the culture shaped attitudes toward risk over time, as Vaughan did with her analysis of NASA.

Suggested Reading:

Presidential Commission on the Space Shuttle Challenger Accident, *Report to the President*.

Vaughan, *The Challenger Launch Decision*.

Questions to Consider:

1. How do culture and history shape decision making in a situation such as the *Challenger* launch?
2. Are there some other examples of the normalization of deviance that you recall?
3. What might leaders do to mitigate this normalization process?

Lecture Nineteen

Allison's Model—Three Lenses

Scope: In this lecture, we examine a conceptual model that shows how we can look at decision making from 3 perspectives that correspond to individual, group, and organizational levels of analysis. The idea is that we can better understand decision making if we use conceptual lenses from each level of analysis. We explain Graham Allison's "three models" analysis of the Cuban missile crisis, which we touched on in an earlier lecture on group dynamics. Here, we see how Allison applies each of 3 conceptual lenses to try to understand the decisions made in that crisis. One model looks at the crisis from an individual cognitive perspective, a second takes a group-dynamics view, and a third examines it from the perspective of organizational politics and bargaining. Allison shows that we can only understand the decision making completely if we apply each alternative lens.

Outline

- I. In this lecture, we examine a groundbreaking conceptual model that shows how we can look at organizational decision making through 3 lenses.
 - A. Graham Allison was a political scientist who taught at the Kennedy School of Government at Harvard.
 - B. He also served as an adviser to several presidents during the cold war.
 - C. Allison sought to question whether we could simply look at the leaders of a large, complex organization to understand decisions that were made.
 - D. He wanted to understand how decisions might not simply be the product of a leader's thinking—how they might be the outcome of group dynamics, organizational processes, and organizational politics.
 - E. He wrote a classic book in which he developed 3 lenses for looking at any complex organizational decision, and he illustrated the model by looking at the Cuban missile crisis through each lens. Each lens provided an alternative way of explaining why certain decisions were made during that crisis.
 - F. His work influenced many other scholars. As he was developing his work, he participated in a seminar with a young management scholar named Joseph Bower, of the Harvard Business School. We'll take a look at Bower's work in this lecture as well.
- II. Allison's first lens was what he called the rational actor model.
 - A. Allison wrote that many people looked at organizational decision making as the product of the thinking of a rational leader at the top. By "rational," he referred to how economists and game theorists modeled decision making.
 - B. In game theory, the notion is that individuals make decisions based on an assessment of what other players (perhaps rivals) will do.
 1. Game theorists point out that self-interested behavior on the part of each individual party sometimes leads to a suboptimal outcome. Collaboration can yield a better outcome.
 2. The classic example of this problem is called the prisoner's dilemma.
 3. In the prisoner's dilemma, 2 criminals each do what is in their self-interest, given their expectation of how the other will behave.
 4. Unfortunately, they would be better off if they could collude.
 5. Game theorists have then looked at how collaboration might evolve without collusive behavior. They focus, in particular, at how collaboration might evolve over time if a "game" is repeated many times.
 6. One strategy for enticing other parties to collaborate is called the tit-for-tat strategy.
 - C. Allison and others have criticized these game theory models for several reasons.
 1. Most importantly, they assume that the other party is rational and is clearly pursuing its self-interest.
 2. Critics wonder if decision makers canvass the full range of options or if they satisfice, as James March and Herbert Simon suggest.
 3. Game theory also assumes that each party can accurately predict and take into account their payoffs, as well as their rivals', under alternative scenarios. Some have questioned this presumption.
 4. Allison wondered whether it was reasonable to think that Khrushchev was acting rationally during the Cuban missile crisis.
 - D. More generally, Allison wondered whether the classic economic model of rational choice applied during the Cuban missile crisis.
 1. To some extent, it did, as Kennedy and his team did look at options, conduct analysis, engage in debate, and so on.
 2. However, Allison concludes that this model is an incomplete understanding of the decision-making process.

III. Allison's other 2 lenses are models of organizational processes and coalition politics.

- A. In terms of organizational processes, Allison points out that organizations develop routines, decision rules, and procedures.
 - 1. He builds heavily on the work of Herbert Simon, Richard Cyert, and James March in crafting this second model.
 - 2. The argument is that decisions do "bubble up from below" at times, based on the decision rules and routines of various subunits of the organization.
 - 3. Clearly, during the Cuban missile crisis, we see how the procedures of various units of the government shaped and constrained the ultimate decisions that were made.
- B. In terms of organizational politics, Allison focuses on the notion that all organizations are governed not simply by a single leader, but by a "dominant coalition."
 - 1. That senior management team, or dominant coalition, engages in bargaining and negotiating during decision-making processes.
 - 2. Each member of the coalition has his or her own interests and objectives, beyond simply the shared organizational goals.
 - 3. The balance of shared and personal goals creates room for negotiation.
 - 4. Tension arises between what negotiation scholars call value-claiming and value-creating behavior.
 - 5. Decisions result from the outcome of these complex negotiations.
 - 6. These negotiations involve a hefty amount of political behavior in many cases.
- C. In sum, Allison argues that we can't simply look at the leader to understand decision making in complex organizations. Decisions are not simply the product of the leader's cognitive process.

IV. Joseph Bower's work in the field of strategic management has many parallels to Allison's work.

- A. As it turns out, both were young scholars participating in a seminar together at Harvard back in the late 1960s. They greatly influenced one another's work.
- B. Bower was working in the field of strategic management, which operated under a paradigm established by scholars such as Alfred Chandler.
 - 1. Chandler had written a classic book looking at the history of American business enterprise, in which he argued that strategy tended to drive organizational structure.
 - 2. Strategy professors tended to become very prescriptive in the years that followed, arguing that strategy should drive structure. Leaders needed to set the strategic decisions and then build organizations to execute those decisions.
- C. Bower studied strategic choices through extensive field research, and he concluded that strategy does not always drive structure and that leaders do not always make strategic decisions at the top.
 - 1. He found that strategic decisions unfolded across multiple layers of the organization.
 - 2. Strategic decisions often bubbled up from below.
 - 3. The structure and culture of the organization shaped that bubbling-up process.
 - 4. Thus, leaders at the top did not always simply make strategic choices. Sometimes they shaped the structure and culture, which in turn affected the strategic choices that bubbled up from below.
- D. Like Allison then, Bower concluded that we cannot understand complex organizational decisions simply by looking at the leader or the top management team of the organization. We have to understand organizational processes, culture, and structure.

Suggested Reading:

Allison, *The Essence of Decision*.

Bower, *Managing the Resource Allocation Process*.

Questions to Consider:

- 1. Why do we sometimes view organizations as monoliths with a single rational actor at the top making all the key decisions?
- 2. What do Allison's Models II and III add to our understanding of how decisions are made in organizations?
- 3. What are the limitations of traditional game theory models of behavior?

Lecture Twenty

Practical Drift

Scope: While Allison uses multiple conceptual lenses to examine why decisions take place as they do, some scholars subsequently have shown that multiple lenses need not be viewed as alternative explanations of a situation. Effective explanation of some decision-making situations requires us to integrate multiple conceptual lenses, at multiple levels of analysis. Here, we examine a military friendly-fire case study from northern Iraq in 1994. In that situation, we can only understand the faulty decision making if we examine how the fighter pilots thought (an individual cognitive perspective), how the AWACS (Airborne Warning and Control System) teams behaved (a group-dynamics perspective), and how the task force's culture evolved (an organizational perspective). We will close by examining Scott Snook's cross-levels theory of practical drift, which explains why the organization came to make decisions that violated key standards that had been established at the start of the mission.

Outline

- I. Over the years, scholars have tried to understand complex organizational decisions by examining them through multiple lenses.
 - A. However, rather than simply looking at the lenses as alternative ways to explain a set of decisions, scholars have tried to integrate multiple perspectives.
 - B. Scholars have examined situations from individual, group, and organizational units of analysis and then tried to integrate these perspectives.
 1. One example of this work is my research on the 1996 Mount Everest tragedy.
 2. Another powerful example is Scott Snook's work on a friendly-fire accident that took place in 1994 in northern Iraq.
 3. Snook examined the incident using theories of individual, group, and organizational decision making.
 4. Then he integrated these perspectives, creating a cross-levels analysis. From this, he developed his theory of practical drift for how some faulty organizational decisions are made. We'll look at that theory in this lecture.
- II. The friendly-fire incident that Snook studied took place in the no-fly zone established by the United States after the first Persian Gulf War.
 - A. The no-fly zone in northern Iraq was a region where the Kurdish people lived.
 1. The United States and its allies were worried about persecution of the Kurds after the war by Iraqi dictator Saddam Hussein.
 2. Thus, it established a no-fly zone in the region where the Kurds lived. American planes patrolled the skies to ensure that Iraqi aircraft did not fly there. The worry was that Iraqi aircraft could bomb Kurdish villages.
 3. In addition to patrols of the skies to avoid attacks by Hussein against the Kurds, the no-fly zone operation involved the delivery of humanitarian relief to the Kurdish people.
 - B. In April 1994, tragically, 2 U.S. fighter jets (F-15 planes) accidentally shot down 2 U.S. Black Hawk helicopters on a humanitarian relief effort in northern Iraq. An American AWACS surveillance plane was in the area at the time, and it knew that both U.S. jets and U.S. helicopters were in the northern Iraqi airspace, but it did not intervene aggressively to prevent the accident.
- III. At the individual unit of analysis, Snook focused on how the fighter pilots behaved.
 - A. In particular, he focused on their expectations, both before they flew that day and at the time they saw the helicopters.
 1. According to policy, the fighter jets should sweep the zone before anyone else was allowed into that airspace.
 2. In addition, the fighter pilots' papers did not indicate that the helicopters were supposed to be there that day.
 3. Thus, when they flew that morning, the fighter pilots did not expect to see any friendly aircraft.
 4. Once they saw the helicopters, they pursued a number of actions to verify whether they were friendly or enemy aircraft.
 5. As they went through these actions, everything seemed to indicate that the aircraft were the enemy's.
 6. Their final check was to conduct a visual identification of the helicopters.
 7. The pilots thought they were seeing enemy helicopters; they were clearly mistaken.
 8. Snook argues that the pilots saw what they expected to see. All the prior signals and data pointed to the fact that these were not friendly aircraft.
 - B. Snook also examined the personal interaction between the 2 pilots.
 1. He found that ambiguity over their roles caused confusion and miscommunication in the skies.

2. The confusion had to do with the fact that the wingman on that day was actually the flight leader's boss. But, according to policy, the flight leader was "in charge" in the sky (but not when they returned to the ground).
3. That confusion led them to not verify and confirm each other's conclusions effectively when they conducted the visual identification.

IV. At the group level of analysis, Snook examined how the team behaved on the AWACS plane.

- A.** Clearly, there were issues regarding the climate of openness.
 1. The AWACS officers were clearly of lower status than the fighter pilots.
 2. Thus, they were reticent to challenge the pilots' conclusions.
- B.** Moreover, there were clearly issues of accountability within the AWACS team.
 1. This was clearly a situation where "if everyone is responsible, no one is responsible."
 2. Teams sometimes have these breakdowns in accountability, and it leads to risky decisions.
 3. Psychologists describe this phenomenon as the "risky shift," where teams make riskier decisions than individuals would.
 4. The risky shift does not always occur, and psychologists have disagreed as to why this sometimes occurs, but not always.
 5. The concept, though, is that in a team, there is a diffusion of responsibility that sometimes takes place, such that people are willing to take more risks than they would as individuals.

V. At the organizational level of analysis, Snook examined how a lack of integration among units of the organization led to flawed decisions.

- A.** Here, it's important to note that the task force consisted of both air force and army personnel.
 1. The fighter pilots were air force personnel.
 2. The AWACS officers were also air force personnel, but clearly a different subunit of the organization.
 3. The Black Hawk helicopters contained army personnel.
- B.** Interservice rivalries clearly existed.
 1. Moreover, a number of other barriers existed among the various units, which inhibited communication.
 2. Thus, as an example, the army helicopter pilots did not know about an important code change that had been made by the air force.
 3. That code change is one reason why the fighter pilots could not identify the Black Hawks as friendly aircraft.

VI. Snook argued that these different lenses were not sufficient to explain what happened. He crafted his theory of practical drift, which he described as a "cross-levels" phenomenon. Here is how practical drift works.

- A.** All organizations establish rules and procedures.
- B.** Units within the organization engage in practical action that is locally efficient.
- C.** These locally efficient procedures become accepted practice and perhaps even taken for granted by many people.
- D.** Gradually, actual practice drifts from official procedure.
- E.** The drift is not a problem most of the time, but in certain unstable situations, it gets us into big trouble.
- F.** We see this most visibly with regard to how the helicopter pilots gradually became comfortable with flying into the no-fly zone while not changing radio frequencies, despite the fact that the original policies established at the outset of the mission called for a change in radio frequencies when aircraft moved from Turkey into northern Iraq.

VII. In conclusion, we see many organizational decisions that occur because of practical drift.

- A.** Organizations have many informal processes that drift away from official procedure.
- B.** Some of that informal action is thoughtful and entrepreneurial.
- C.** But sometimes communication breakdowns (and other barriers) cause organization members to not understand how their actions may affect others in other units.
- D.** Unforeseen interactions occur at times, and this can be problematic.
- E.** To address these issues and avoid the problems of practical drift, organizations need to do the following.
 1. Foster transparency in organizational structures and systems.
 2. Avoid Band-Aid approaches to small problems.
 3. Create a climate of open and candid dialogue.
 4. Carefully watch for when information is "handed off" from one unit of the organization to another.
 5. Attack silo thinking and work out interdivision rivalries.
 6. Design more effective cross-functional teams.
 7. Conduct careful after-action reviews to improve processes.

Suggested Reading:

Reason, *Managing the Risks of Organizational Accidents*.

Snook, *Friendly Fire*.

Questions to Consider:

1. How do expectations distort our decision-making behavior?
2. What is practical drift, and why does it occur?
3. How can we mitigate or address practical drift effectively?

Lecture Twenty-One

Ambiguous Threats and the Recovery Window

Scope: When making decisions, organizations often have to deal with a great deal of ambiguity. The threats that they face are not always clear. When faced with ambiguous threats, organizations often tend to downplay or minimize the risks. In this lecture, we examine why organizations discount ambiguous threats, how that impairs decision making in crucial situations, and how leaders might rectify these kinds of situations. The case study is again of NASA, but this time we examine the *Columbia* space shuttle accident, which took place 17 years after the *Challenger* explosion. We show how we must examine the incident from 3 levels of analysis in order to understand why such flawed decisions took place. We introduce the notion of a recovery window—the idea that there is usually a period of time between when an ambiguous threat arises and when a large-scale failure occurs. The key for leaders is to act quickly to investigate that threat, leaving enough time to recover. We examine how and why one might organize to behave most effectively during recovery windows.

Outline

- I. Multiple levels of analysis can help us understand a particularly thorny decision-making problem for organizations, namely, situations in which the organization is faced with ambiguous threats.
 - A. All organizations face ambiguous threats at times, where a problem exists, but its consequences are highly uncertain.
 - B. Organizations usually have some finite opportunity to recover from those initial threats.
 - C. However, many organizations systematically discount and underreact to ambiguous threats.
 - D. This raises 2 questions:
 1. Why do organizations discount ambiguous threats when making decisions?
 2. How can organizations improve their decision making in these situations?
 - E. It's important to introduce the concept of a recovery window at this point.
 1. A recovery window is the time period between the emergence of an ambiguous threat and the actual occurrence of a catastrophic failure, during which some preventive action can be taken.
 2. Recovery windows can last minutes, weeks, or months.
 3. Many organizations fail to take advantage of these recovery windows.
 4. Simply raising awareness of this concept can be important in helping organizations become more effective at making decisions.
- II. Let's take a look at the case of the *Columbia* shuttle accident of 2003.
 - A. The shuttle launched in January 2003. A chunk of insulating foam came off the external tank and struck the leading edge of the wing during launch.
 - B. Engineers and managers became aware of this incident when photos of the launch were reviewed and disseminated on the day after the launch.
 - C. Engineer Rodney Rocha became worried. It was the largest chunk of dislodged foam he had ever seen.
 - D. Over the course of the mission, Rocha and a team of engineers studied the threat of the foam strike.
 - E. However, managers chose not to pursue all angles for investigating the foam strike. They downplayed the threat.
 - F. Ultimately, the shuttle disintegrated upon reentry into Earth's atmosphere, because hot gases entered the shuttle through the large hole punctured by the foam.
- III. A 3-level analysis can help us understand why organizations, and NASA in this case, downplay ambiguous threats.
 - A. At the individual level, we can think about cognitive factors affecting decision making at NASA.
 1. Clearly, we had cognitive biases affecting NASA managers.
 2. Evidence exists of confirmation bias and the sunk-cost effect.
 3. In addition, NASA had adopted what Amy Edmondson describes as a production or operational frame with regard to the shuttle program, rather than a learning or experimental frame.
 4. The mind-set, or mental model, was that shuttle flight would be routine. Thus, they organized the program more as an automobile assembly line than a research and development laboratory.
 - B. At the group level, we had issues of team design and team climate.
 1. In terms of team design, the ad-hoc debris assessment team, which studied the foam strike, was not a well-designed group. Those flaws inhibited its effectiveness.
 2. In terms of team climate, the mission management team did not have a climate of open and candid dialogue. Dissenting views were not surfaced effectively.

3. The mission management team leader, in particular, did not seek out alternative points of view.
- C. At the organizational level, the structure and culture of NASA led them to downplay the threat.
 1. The structure was very hierarchical, with rigid rules of protocol.
 2. In terms of the culture, the safety orientation called for intensive data to prove a point, coupled with a burden on engineers to prove the shuttle was not safe (as opposed to proving it was safe).
- D. Many organizations, not just NASA, experience these kinds of pressures, which cause them to downplay ambiguous threats. Consider everything from how U.S. leaders acted prior to Pearl Harbor to the reaction of newspaper executives in the early days of the Internet.

IV. How can organizations cope with ambiguous threats more effectively?

- A. Consider for a moment the *Apollo 13* crisis, which was a case of a clear threat.
 1. Kranz led a spectacular effort to address the threat from the oxygen tank explosion.
 2. He was remarkably prepared for that incident, as it turned out.
 3. However, that threat was clear—not ambiguous as in the foam strike.
 4. The question is whether organizations can behave as effectively as NASA did during the *Apollo 13* crisis in situations that are more ambiguous.
- B. Are there examples from which we can learn about how to cope with ambiguous threats?
 1. Consider Toyota, which proactively deals with threats through its Andon cord system.
 2. Consider also many hospitals, which have now instituted a mechanism called rapid response teams to try to detect oncoming cardiac arrests.
- C. From these examples, we learn that coping with ambiguous threats requires organizational leaders to do the following.
 1. Amplify threats and make it clear to everyone that a recovery window is now open.
 2. Engage in learning by doing, particularly through simple, low-cost, rapid experimentation.
 3. Lead a top-down, directed effort to establish focused, cross-disciplinary problem-solving teams to address threats.

Suggested Reading:

Columbia Accident Investigation Board, *Columbia Accident Investigation Board Report*.

Starbuck and Farjoun, *Organization at the Limit*.

Questions to Consider:

1. Why do individuals and organizations downplay ambiguous threats?
2. Can we investigate ambiguous threats in a cost-effective and timely manner?
3. Why is it problematic to have a culture where the burden of proof is to prove that something is incorrect or unsafe?

Lecture Twenty-Two

Connecting the Dots

Scope: For organizations to make good decisions, they often must face threats and problems that first appear in a fragmented fashion. In other words, different parts of a complex organization see small bits of information that pertain to the problem, but no one unit or person sees the entire picture. The key to good decision making in these situations is an organization that can achieve integration (i.e., leaders and teams who can “connect the dots” across the organization to see the bigger picture). Drawing on both the 9/11 attacks and a case study of the FBI’s attempts to reform after 9/11, we examine how and why organizations find it hard to connect the dots, and why such failures lead to faulty decision making. We also examine how the FBI and others are trying to find techniques for improving the way that they connect the dots moving forward.

Outline

- I. For organizations to make good decisions, they often must face threats and problems that first appear in a fragmented fashion.
 - A. Consider the case of the 9/11 tragedy. Many of the investigative entities concluded that the U.S. intelligence community failed to detect signs that a massive terrorist attack would take place.
 - B. It was discovered that many different agencies had bits of information that could have helped detect the attacks, but that information was never shared or integrated properly.
 - C. As Senator Shelby noted, the U.S. intelligence community had failed to “connect the dots.”
 - D. Many organizations face difficulty trying to connect the dots among disparate elements of information that exist in various subunits.
- II. After the attacks, CIA Director George Tenet reflected that “the system was blinking red” in the summer prior to the attacks.
 - A. Various agencies received information regarding possible threats against the United States from terrorists.
 - B. Beyond this vague information, though, there were several more concrete pieces of information not shared and integrated effectively across units of the intelligence community.
 - C. First, we had the case of Khalid al Mihdhar and Nawaf al Hazmi, 2 of the 9/11 hijackers who were tracked by the CIA back in 2000 to a meeting in Kuala Lumpur.
 1. The CIA did not inform other units of the federal government when they discovered that these men were traveling to the United States.
 2. Thus, they received visas from the Immigration and Naturalization Service, and they settled into residence here in the United States quite normally.
 3. They opened bank accounts and obtained driver’s licenses under their real names, unbeknownst to the FBI.
 4. The CIA later investigated the connection these men had to the attacks on the USS *Cole*, but they again did not inform the State Department to prevent these men from traveling to and from the United States.
 5. Only in August 2001 did the CIA finally inform the FBI about these men and ask that the FBI begin searching for them. It was too late.
 - D. Meanwhile, an agent in the Phoenix field office of the FBI was investigating some men with radical Islamic beliefs who were attending flight schools.
 1. That agent, Kenneth Williams, eventually wrote a memo in the summer of 2001, asking headquarters to push forward with a broader investigation of radical Islamic fundamentalists who were attending flight schools in the United States.
 2. The memo never rose to the highest levels of the FBI, and it never provoked action by headquarters.
 - E. Finally, in the FBI’s Minneapolis field office, agents were investigating another suspicious individual who was attending a local flight school.
 1. That man was trying to learn how to fly a 747, despite the fact that he had no pilot’s license and did not work for a commercial airline.
 2. Agents asked headquarters for permission to expand their investigation, after they judged him to have possible connections with terrorists.
 3. Conflict emerged between the field office and headquarters, which denied the request to expand the investigation.

4. One agent in the Minneapolis office, in exasperation, actually said that he was just trying to prevent the man from flying a plane into the World Trade Center—an eerie statement given what happened just a few weeks later.
- F. As it turned out, no one connected these various investigations.
1. The FBI didn't know what the CIA was doing.
 2. The Phoenix office of the FBI didn't know what the Minneapolis office was doing, and vice versa.
 3. No one at headquarters ever connected the field incidents to the general increase in threat reporting that was taking place that summer.

III. There are various reasons why organizations do not share and integrate information effectively.

- A. In complex organizations, we have problems of structural complexity.
- B. We also have high levels of differentiation among subunits, which can come at the expense of integration.
- C. Finally, concerns about power can impede information sharing. People can cling to information because it provides them power.
- D. More generally, we know that even small groups have trouble sharing information, as we discussed in an earlier lecture. We know that people tend to focus on information they hold in common with others and pay much less attention to privately held information.

IV. How can leaders foster more effective connecting of the dots within organizations?

- A. Leaders can work on their facilitation skills and approaches in various group settings.
 1. They can “manage airtime”—ensuring that a few people do not dominate the discussion.
 2. They can reiterate ideas and statements that emerged quickly but perhaps did not receive adequate attention from others.
 3. They can ask many clarifying questions to ensure and test for understanding.
 4. They can invite dissenting views and induce debates.
 5. Finally, leaders can take time near the end of a decision-making process to highlight the areas of remaining uncertainty that would ideally be resolved before making a decision.
- B. At the organizational level, leaders might adopt centralized or hierarchical structures to help connect the dots.
 1. The formation of the Director of National Intelligence Office and the Department of Homeland Security represent examples of that approach.
 2. Such hierarchical approaches can be quite problematic though.
- C. Alternatively, organizations can work on other types of mechanisms to foster sharing and integration of information.
 1. Leaders can foster the formation and enhancement of social networks across organizational units.
 2. Leaders can use technology and mass collaboration techniques to marshal the collective knowledge and intellect of many people throughout an organization (through things such as wiki technology).
 3. Most importantly, leaders need to work on the mind-set of people throughout the organization, to see that sharing information becomes more acceptable and that problem prevention becomes as rewarded and valued as problem solving.

Suggested Reading:

National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report*.

Tapscott and Williams, *Wikinomics*.

Questions to Consider:

1. Why does proper and effective information sharing not occur in groups and organizations?
2. How can teams foster more effective information sharing?
3. What can organizations do to encourage better information sharing across silos?

Lecture Twenty-Three

Seeking Out Problems

Scope: To close the section on organizational dimensions of decision making, we examine the concept of high-reliability organizations (HROs). HROs are complex, seemingly high-risk systems that have achieved a very low level of decision failures. For instance, we will look at nuclear aircraft carriers as an example of successful HROs. Commercial aviation also has HRO characteristics, as do some hospitals. In HROs, decision making is enhanced because of a preoccupation with failure, and sensitivity to deviations from what is expected. These organizations are highly vigilant, seeking out problems rather than sweeping them under the rug. To some extent, Toyota represents a company that has applied HRO concepts to business processes, and it consequently has achieved a high level of performance.

Outline

- I. While many scholars have studied organizational decision-making failures, we also have a body of researchers who have studied why some complex organizations in high-risk environments have operated with very few accidents over many years. They have coined the term “high-reliability organizations” (HROs) to describe these enterprises.
 - A. Scholars have examined organizations such as aircraft carriers and air traffic control centers.
 - B. The error rates for these organizations are remarkably low given the hazardous conditions in which they operate.
 1. For instance, Karlene Roberts has noted that the number of accidents for pilots operating on naval aircraft carriers is amazingly low—slightly less than 3 fatalities per 100,000 hours of flight time.
 2. Scholars in the high-reliability field have argued that some organizations seem to have found a way to cope with the interactive complexity and tight coupling that Charles Perrow believed led to inevitable failures.
- II. Karl Weick and Kathleen Sutcliffe have coined the term “mindfulness” to describe the 5 characteristics of most HROs.
 - A. First, HROs appear to be preoccupied with failure of all sizes and shapes.
 1. They do not dismiss small deviations or settle on narrow, localized explanations of these problems.
 2. Instead, they treat each small failure as a potential indication of a much larger problem.
 3. David Breashears has described how great climbers are obsessed with thinking about ways that they might fail on a mountain.
 4. Similarly, Toyota has a culture that embraces and seeks out small failures constantly, looking then for how these failures might indicate large systemic problems.
 - B. Second, HROs exhibit a reluctance to simplify interpretations.
 1. We all try to simplify the messy world around us.
 2. HROs recognize that sometimes we oversimplify.
 3. They look for odd things that don’t seem to fit their picture of how things usually work.
 4. They build diverse teams and welcome a wide variety of perspectives that challenge the conventional wisdom.
 - C. HROs demonstrate sensitivity to operations.
 1. They do not allow the emphasis on the big picture—strategic plans, vision statements, and so on—to minimize the importance of frontline operations, where the real work gets done.
 2. They truly empower frontline workers, as Toyota does with its Andon cord system and hospitals do with their rapid response team process.
 - D. Fourth, HROs exhibit a commitment to resilience.
 1. They recognize that no hazardous and complex system will be error free.
 2. They recognize that mistakes happen, and that they are not typically because of negligence or malfeasance.
 3. Often, mistakes suggest systemic problems.
 - E. Finally, HROs ensure that expertise is tapped into at all levels of the organization.
 1. They work hard to flatten the hierarchy.
 2. Their leaders stay in touch with, and gather input from, people at all levels.
 3. Their leaders are cognizant of the fact that key information, particularly bad news, often gets filtered out as it rises up a hierarchy.
- III. There have been some critiques of this research on HROs and on the findings related to how organizations should behave to prevent major failures.
 - A. First, some scholars question the very definition of HROs. There are lots of organizations that have low error rates. Are they all HROs?

- B. The HRO literature stresses the importance of redundancy, but some, like Charles Perrow, argue that redundancy can at times increase risk of accidents.
 - C. Some critics argue that the HRO scholars are really just advocating increased vigilance, and that vigilance alone doesn't improve safety.
- IV. Thus, the question still remains: How does an organization become "preoccupied with failure" without completely sacrificing its other goals and objectives?
- A. We studied a phenomenon in hospitals called rapid response teams to try to answer this question.
 - B. A few years ago, hospitals noticed that staffers often observed the early signs of an imminent cardiac arrest but did not share their observations.
 - C. Hospitals have designed something called the rapid response team process to address this problem.
 - 1. Hospitals have now created lists of early warning signs of cardiac arrests, and they have empowered nurses to call in a rapid response team if they see one of these warning signals—so as to help them assess the significance of these ambiguous threats.
 - 2. Hospitals often describe this process as "calling a trigger"—meaning that frontline staffers are identifying a small problem that may trigger a serious incident in the near future.
 - 3. These rapid response teams are cross-disciplinary groups that are highly skilled at quickly assessing whether a warning sign merits further action.
 - 4. This rapid response process enables and empowers inexperienced nurses to speak up when something doesn't look right.
 - 5. Many hospitals have reported substantial decreases in the number of "code blues" after implementing rapid response teams.
 - 6. They also report that many other improvement ideas have emerged from this process, even in instances when the threats did not prove to be "real."
 - 7. Here, then, we have an example of a process that aims to seek out small failures before they become large ones, and it does so in a way where the benefits easily exceed the costs.
 - 8. In short, one can improve decision making by proactively seeking small threats and problems, without grinding the organization to a halt.
 - D. Leaders of all organizations, then, must try to develop simple, low-cost, rapid processes for surfacing, discussing, and analyzing small problems. Making good decisions about small problems can help prevent larger failures down the road.

Suggested Reading:

Dekker, *Just Culture*.

Weick and Sutcliffe, *Managing the Unexpected*.

Questions to Consider:

1. What are the key traits of high-reliability organizations?
2. Are the critiques of the high-reliability literature valid? Why or why not?
3. Can an organization become too preoccupied with failure? If so, how?

Lecture Twenty-Four

Asking the Right Questions

Scope: In this concluding lecture, we will summarize some of the key lessons learned from the course. We will describe how a new form of leadership is needed if organizations hope to improve their decision making. Specifically, leaders need to shift from a focus on driving what is decided to instead focusing on how decisions are made in their organizations. Effective leaders direct the process of decision making so as to marshal the collective intellect of the organization, rather than trying to come up with all the answers themselves. As Peter Drucker once said, “the most common source of management mistakes is not the failure to find the right answer; it is the failure to ask the right question.” Great leaders ask good questions, and they design decision-making processes where all members of the organization are empowered to ask good questions of one another. That is the essence of how leaders can ensure that their organizations make and implement better decisions.

Outline

- I. Robert McNamara has pointed out that while case studies are useful in business education, they overlook an important factor: the need for leaders to identify a problem before they can solve it.
 - A. In many instances, leaders do not spot a threat until it is far too late.
 - B. At times, leaders set out to solve the wrong problem.
- II. In order to be an effective leader, you need to become a better problem finder, not just a better problem solver.
 - A. Organizational breakdowns and collapses tend to evolve over time, beginning with small errors that are compounded and eventually gain momentum.
 - B. Leaders need to become hunters who venture out in search of problems that might lead to disasters for their firms. The sooner they can identify and reveal problems, the more likely it is that they can prevent a catastrophe.
 1. Anne Mulcahy, CEO of Xerox, turned around the struggling company by seeking out problems herself and insisting that executives maintain regular contact with customers.
 2. Helena Foulkes of CVS also put her executives in closer touch with customers by eliminating the company’s reliance on “mystery shoppers” and making comments from customers a daily experience for executives.
 3. David Tacelli of LTX Corporation has implemented a rigorous customer review system, and he engages in the Socratic method with his managers to establish the causes of customer dissatisfaction.
- III. Winston Churchill was one of the greatest problem finders in recent history—a prescient leader who saw problems and threats far before others did.
 - A. Churchill foretold the threat from increasing German militarism in the years leading up to World War I. Similarly, he tried to sound alarms about Hitler in the 1930s, but his warnings fell on deaf ears.
 - B. How did Churchill cultivate this ability to spot threats?
 1. He traveled relentlessly to speak with people far and wide, from inside and outside government.
 2. He was a voracious learner and incredibly inquisitive.
- IV. What’s the common thread that ties together the great problem finder with the great problem solver or decision maker?
 - A. Leaders must discard the notion that they have all the answers.
 - B. Leaders must focus on shaping and directing an effective decision-making process, marshaling the collective intellect of those around them.
 - C. Leaders must focus on process, not just content.
 - D. As Peter Drucker notes, “the most common source of mistakes in management decisions is the emphasis on finding the right answer rather than the right question.”

Suggested Reading:

Drucker, *The Practice of Management*.

Heifetz, *Leadership without Easy Answers*.

Questions to Consider:

1. What does it mean to be a problem finder as opposed to simply a problem solver?
2. Why is the discovery and framing of problems so difficult?
3. Why do leaders have to focus on questions, rather than answers, when leading decision-making processes?

Glossary

affective conflict: Disagreement that is rooted in personality clashes and personal friction. It involves emotion and anger. It is not issue- or task-oriented in nature.

anchoring bias: Refers to the notion that we sometimes allow an initial reference point to distort our estimates.

cognitive bias: The decision-making traps that afflict all of us as we try to make choices. We fall into these traps because of cognitive limitations that are characteristic of all human beings. Cognitive biases include such judgment errors as the sunk-cost trap and the confirmation bias.

cognitive conflict: Task-oriented or issue-oriented debate within a group. It is disagreement based on the substance and content of a decision, rather than based on personalities and emotions.

confirmation bias: The tendency to gather and rely upon information that confirms our existing views, while avoiding or discounting information that might disconfirm our existing hypotheses and opinions.

consensus: Decision-making consensus is defined as the combination of commitment and shared understanding. It means that individuals are committed to cooperate in decision implementation and that they have a strong shared understanding of the rationale for the decision, their contribution to the final choice, and their responsibility in the execution process.

deferred judgment: A key principle of brainstorming. It means that individuals go through a phase of the brainstorming process in which they refrain from judging or criticizing others' ideas. Instead, they simply focus on generating as many new ideas as possible.

devil's advocacy: A structured group decision-making method whereby a team splits into 2 subgroups. One subgroup proposes a plan of action, while the other critiques the plan so as to expose flawed assumptions and hidden risks.

dialectical inquiry: A structured group decision-making method whereby a team splits into 2 subgroups that then discuss and debate competing alternatives.

groupthink: The term coined by social psychologist Irving Janis to describe the powerful social pressures for conformity that sometimes arise within groups, causing people to self-censor their views—particularly dissenting opinions.

high-reliability organizations: Those complex organizations in high-risk environments that have operated with very few accidents over many years.

intuition: Fundamentally a process of pattern recognition based on past experience. Through pattern matching, individuals are able to make intuitive judgments without going through an appraisal of multiple alternatives, as many "rational" models of choice would suggest.

normal accidents: Those catastrophic failures that are quite likely to eventually occur in high-risk organizations that are characterized by complex interactions and tight interconnections among components of the organizational system.

normalization of deviance: A phenomenon described by Diane Vaughan in her study of the *Challenger* space shuttle disaster. It is a situation in which organizations gradually come to accept higher levels of risk and to take those risks for granted over time.

practical drift: The term coined by Scott Snook to describe how accepted, taken-for-granted practice within organizations gradually can move away from standard operating procedure.

procedural justice: Refers to the perceptions among participants in a decision that the process is both fair and equitable.

procedural legitimacy: Refers to the perception that a group or organizational process meets certain acceptable and desirable behavioral norms, according to general societal standards and beliefs.

process losses: The failed attempts to capitalize on the synergistic potential of groups. A process loss occurs when a group of people do not manage to pool the talent and expertise of the individual members to create a better solution than any individual could come up with on his or her own.

prospect theory: Put forth by Amos Tversky and Daniel Kahneman, this theory argues that individuals will exhibit different risk-taking tendencies depending on how a decision is framed.

reasoning by analogy: This takes place when we try to determine what choice to make by drawing direct comparisons to a situation in the past that we deem to be quite analogous to the current circumstance.

recency effect: The tendency to overweight readily available information, specifically recent data, when judging the probability of certain events occurring in the future.

recovery window: The period of time between the identification of an ambiguous threat and the eventual catastrophic failure, during which some actions can be taken to prevent the failure from occurring.

sensemaking: The cognitive process whereby individuals and groups interpret and understand ambiguous situations.

small wins: Refers to a theory put forth by Karl Weick, whereby a large and complex problem is broken down into smaller components to enable a group to make progress toward finding an acceptable solution in a timely and effective manner.

sunk-cost effect (or sunk-cost trap): The tendency to escalate commitment to a failing course of action if one has invested a great deal of time, money, and other resources that are not recoverable.

Biographical Notes

Breashears, David (b. 1955): David Breashears is a highly accomplished mountaineer and award-winning filmmaker. He has reached the summit of Mount Everest numerous times. Breashears was filming the IMAX documentary *Everest* during the famous 1996 Everest tragedy, which was written about in books such as *Into Thin Air* by Jon Krakauer. Breashears observed those tragic events in May 1996. Having turned around before the other expedition teams kept climbing toward the summit and got caught in the terrible storm, Breashears later helped in the rescue efforts. He has earned 4 Emmy awards for his filmmaking, and he is the author of several books.

Churchill, Winston (1874–1965): Winston Churchill was the indefatigable British prime minister during World War II. He graduated from the Royal Military Academy at Sandhurst, and he participated in the British army's last full cavalry charge in the Sudan in 1898. Churchill won election to Parliament in 1900, and during World War I, he became First Lord of the Admiralty. He made great strides in building Britain's naval strength, but his disastrous advocacy for the Gallipoli landings on the Dardanelles cost him his job. Churchill was one of the earliest British politicians to sound alarms about Hitler's rise to power in the 1930s. He fervently opposed Prime Minister Neville Chamberlain's appeasement of Hitler. Churchill succeeded Chamberlain in 1940 and earned great acclaim for inspiring his countrymen to withstand Germany's relentless attacks until the United States entered the war. His close relationship with Franklin D. Roosevelt proved vital to the Allied cause. Despite Churchill's efforts to defeat Hitler, he lost a bid for reelection in 1945. Churchill later coined the phrase "iron curtain" to describe the alarming spread of communism and Soviet domination in Eastern Europe. Churchill again served as prime minister from 1951 to 1955. An accomplished biographer and author, Churchill won the Nobel Prize in Literature in 1953.

Dodge, Wagner (d. 1955): Wagner ("Wag") Dodge was the foreman of the smokejumper team involved in the Mann Gulch, Montana, fire of 1949, in which 12 United States Forest Service smokejumpers lost their lives. Dodge was one of the few survivors of the fire. When the fire escalated dramatically, most of the smokejumpers began running for the ridge, trying to elude the fire rushing toward them on the slope of Mann Gulch. Dodge estimated that the men could not outrun the rapidly approaching fire to the top of the ridge, which was roughly 200 yards away. Thus, he bent down and lit an "escape fire" in the grass with a match. Then Dodge placed a handkerchief over his mouth and lay down in the smoldering ashes. Dodge later testified to the review board that he had never heard of the concept of an escape fire prior to Mann Gulch. He simply felt that the idea seemed logical given the situation at the time. After the fire raced right around him, Dodge sat up from his burned patch. The escape fire had deprived the onrushing blaze of fuel, thus forcing it around him. Had the others followed him into his ingenious escape, they too would have lived.

Eisenhower, Dwight D. (1890–1969): Dwight Eisenhower grew up in Abilene, Kansas, and his family was quite poor. Eisenhower attended the United States Military Academy at West Point, and he began his military career in the infantry. He later served as a staff officer under several highly accomplished commanders—first General John J. Pershing and then General Douglas MacArthur. Eisenhower was appointed to the war planning division in 1942, working for General George Marshall, the U.S. Army chief of staff. Eisenhower went on to become the commander in chief of the Allied forces in North Africa, and he directed the Allied invasions of Sicily and Italy. Eisenhower became the supreme commander of the Allied Expeditionary Force in December 1943, and in that role, he directed the massive effort to liberate Europe in 1944–1945. After the war, Eisenhower retired from the military and became president of Columbia University. In 1951, he left that post to lead the military forces of the newly created NATO. In 1952, the American people elected Eisenhower as the 35th president of the United States. He easily won reelection in 1956.

Gerstner, Louis, Jr. (b. 1942): Louis Gerstner Jr. was chairman and chief executive officer of IBM Corporation from 1993 until 2002. He later served as chairman of the Carlyle Group, a private equity firm headquartered in Washington DC. Before becoming CEO of IBM, Gerstner served as CEO of RJR Nabisco and as a senior executive at American Express. He also had been a partner at McKinsey Consulting for many years prior to joining American Express. Gerstner has an undergraduate degree from Dartmouth and an MBA from Harvard Business School. In 2001, he was knighted by Queen Elizabeth II of England.

Grove, Andrew (b. 1936): Andrew Grove was born in Hungary, came to the United States and earned an undergraduate degree at City College of New York, and was awarded his Ph.D. from the University of California at Berkeley. In 1968, Grove became one of the founders of Intel Corporation, after having worked in research and development at Fairchild Semiconductor. He later served as chief executive officer of Intel from 1987 to 1998 and was chairman of the board at Intel from 1997 to 2005. He has served as a lecturer at the University of California at Berkeley and the Stanford University Graduate School of Business. Grove has also authored several books, including *Only the Paranoid Survive* (1996). He was named *Time* magazine's "Man of the Year" in 1997.

Kennedy, John F. (1917–1963): John F. Kennedy graduated from Harvard College and served courageously in World War II. After the war, he served in the U.S. House of Representatives and the U.S. Senate, representing the state of Massachusetts. In 1960, he ran against Vice President Richard Nixon for the presidency of the United States, and he won a tightly contested

election. He was inaugurated as the 35th president of the country in January 1961. Kennedy's term was tragically cut short when he was assassinated by Lee Harvey Oswald on November 22, 1963, in Dallas, Texas. He was succeeded by his vice president, Lyndon B. Johnson. Two of the most famous foreign policy decisions of his presidency were the Bay of Pigs invasion and the Cuban missile crisis.

Kennedy, Robert F. (1925–1968): Robert F. Kennedy was born in Brookline, Massachusetts. He earned a bachelor's degree at Harvard College and graduated with a law degree from the University of Virginia. Kennedy served in the military during World War II, and he worked as a Senate lawyer in the 1950s. He became attorney general during his brother's administration and continued in that role during the early years of the Johnson presidency. However, he left the cabinet and won a seat in the U.S. Senate in 1965, representing the state of New York. While running for the Democratic nomination for president in 1968, Kennedy was assassinated in California.

Krakauer, Jon (b. 1954): Jon Krakauer has a degree from Hampshire College in Massachusetts. He is a highly acclaimed author as well as a mountaineer. He was writing an article about Mount Everest for *Outside* magazine when a number of climbers died in May 1996 during a horrible storm. He later wrote an article about that incident for *Outside* magazine. Based on the popularity of that article, he went on to author a bestselling book, *Into Thin Air*, about the tragedy. Krakauer has written a number of other books as well, including many others about outdoor adventures.

Kranz, Gene (b. 1933): Gene Kranz was born in Ohio and served in the Korean War as a member of the U.S. Air Force. He later became a flight director at NASA during the Gemini and Apollo programs. Kranz was the flight director during the famous *Apollo 13* mission, and he helped bring those astronauts safely home to Earth after an explosion damaged their vehicle in space. Kranz was featured in a movie about the incident, which was directed by Ron Howard. He retired from NASA in the early 1990s. Kranz's autobiography, *Failure Is Not an Option*, was published in 2000. He has earned the Presidential Medal of Freedom for his substantial contributions to America's space program.

Levy, Paul F. (b. 1950): Paul F. Levy was appointed chief executive officer of the Beth Israel Deaconess Medical Center in Boston in January 2002. During his time at the hospital, the institution bounced back from serious financial distress to become a very stable and healthy organization. It enhanced its reputation as a high-quality academic medical center. Prior to joining Beth Israel Deaconess, Levy served as Executive Dean for Administration at Harvard Medical School. Levy was responsible for the Boston Harbor Cleanup Project as executive director of the Massachusetts Water Resources Authority. He also has been chairman of the Massachusetts Department of Public Utilities and director of the Arkansas Department of Energy. Levy also has taught as an adjunct professor at MIT.

McNamara, Robert (b. 1916): Robert McNamara was born in San Francisco, California. He earned a bachelor's degree in Economics and Philosophy from the University of California at Berkeley in 1937 and an MBA from Harvard Business School 2 years later. He became a professor at Harvard Business School in the early 1940s and served in the armed forces during World War II. In 1946, he took a position in the finance organization at Ford Motor Company. He rose quickly to a series of senior management positions at Ford, ultimately becoming the first non-family member to serve as president of the firm. He gained fame at Ford for his highly analytical and quantitative approach to solving business problems. When John F. Kennedy became president of the United States, he appointed McNamara as the secretary of defense despite the fact that he did not have a great deal of specific knowledge about military matters. McNamara instituted many sophisticated planning and budgeting techniques at the Department of Defense during his tenure. He served in his post until February 1968, at which time he became the president of the World Bank. He retired from that post in 1981.

Nixon, Richard M. (1913–1994): Richard Nixon served in the U.S. Navy during World War II and was elected to the U.S. House of Representatives after the war. Nixon became a U.S. Senator and then vice president of the United States during the Eisenhower administration. He failed to win election to the presidency during his first attempt at the office in 1960, when he was defeated by John F. Kennedy. Nixon finally won the presidency in 1968, defeating Vice President Hubert Humphrey and to become the 37th president of the United States. Nixon became president during the Vietnam War, and the war essentially ended on his watch, though only after years of additional conflict. He was responsible for the decision to try to rescue prisoners of war from the Son Tay camp in Vietnam. Nixon resigned in disgrace in 1974 because of the Watergate scandal.

Truman, Harry (1884–1972): Harry Truman served in World War I in the artillery. After the war, he became involved in politics and became a judge in Missouri. He was elected to the U.S. Senate in 1934. In 1944, he was elected as vice president of the United States, under Franklin D. Roosevelt. Shortly after taking office as vice president, Truman assumed the presidency because of the death of Roosevelt. Truman was responsible for the decision to drop the atom bomb on Japan, and he presided over the end of World War II and the rebuilding of Japan and Western Europe after the war. Truman was elected to the presidency in his own right in November 1948 in a stunning win over Thomas Dewey. He served as president while the cold war began, and he made the decision to defend South Korea when the communist North invaded in 1950. He left the presidency in January 1953, after choosing not to run for reelection.

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