
You have to make good choices
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Decision Making and Creativity

The Key Point

When, how, and with whom we make choices is a key to success. But, we don't always make good decisions or use the right decision-making approaches. There are times when it's best to be quick, intuitive, and creative, and others when we should be slow, deliberative, and cautious. Sometimes it's best to make choices alone and many times it's best to involve others. ■

What's Inside?

Chapter at a Glance

The Decision-Making Process

LEARNING ROADMAP

STEPS IN THE DECISION-MAKING PROCESS • THE DECISION TO DECIDE
ETHICAL REASONING AND DECISION MAKING
ALTERNATIVE DECISION ENVIRONMENTS
DECISIONS WITH EXTREME CONSEQUENCES

The world of the manager is the world of choice. It is also no wonder that a Graduate Management Admissions Council survey reports that 25 percent of business school alumni would like more training in managing the decision-making process.[1] Even in your first job, making the appropriate decisions to solve problems will be a key to success.

Steps in the Decision-Making Process

Decision making is the process of choosing a course of action to deal with a problem or opportunity.

A common definition of **decision making** is the process of choosing a course of action for dealing with a problem or an opportunity.[2] The process is usually described in five steps that constitute the ideal or so-called *rational decision model.*

1. *Recognize and define the problem or opportunity*—gather information and deliberate in order to specify exactly why a decision is needed and what it should accomplish. Three mistakes are common in this critical first step in decision making. First, we may define the problem too broadly or too narrowly. Second, we may focus on problem symptoms instead of causes. Third, we may choose the wrong problem to deal with.
2. *Identify and analyze alternative courses of action*—evaluate possible alternative courses of action and their anticipated consequences for costs and benefits. Decision makers at this stage must be clear on exactly what they know and what they need to know. They should identify key stakeholders and consider the effects of each possible course of action on them.
3. *Choose a preferred course of action*—a choice is made to pursue one course of action rather than others. Criteria used in making the choice typically involve costs and benefits, timeliness of results, impact on stakeholders, and ethical soundness. Another issue is who makes the decision: team leader, team members, or some combination?
4. *Implement the preferred course of action*—actions are taken to put the preferred course of action into practice. This is a point where teams may suffer from **lack-of-participation error** because they haven't included certain people in the decision-making process whose support is necessary for its implementation. Teams that use participation and involvement successfully gather information and insights for better decision making, and commitments from team members to put choices into action. Some of the participation techniques are quite simple, such as a checklist for an emergency room surgery team.

Lack-of-participation error occurs when important people are excluded from the decision-making process.

Something to Read—*The Checklist Manifesto: How to Get Things Right* by Atul Gawande

In his book *The Checklist Manifesto* (Picador, 2011), physician and author Atul Gawande suggests that the old-fashioned checklist is a good way to make sure that what he calls "avoidable errors" aren't made.

Bad decisions he says, often sometimes come from missing small things. The best checklists are short and focused on the essentials. If they are too long, they may not get used or key things may be skipped. In teams, such as a surgery team in a hospital emergency room, checklists are empowering because they allow every team member to be part of the control process.

Erik Jacobs/The New York Times

5. *Evaluate results and follow up as necessary*—performance results are measured against initial goals and both anticipated and unanticipated outcomes are examined. This is where decision makers exercise control over their actions, being careful to ensure that the desired results are achieved and undesired side effects are avoided. It is a stage that many individuals and teams often neglect, with negative implications for their performance effectiveness.

The Decision to Decide

The reality is that making and implementing the right choices is complicated. And one of the most critical aspects of the decision-making process is setting priorities. Not every problem requires an immediate response and the best decision may be the one not made. Asking and answering the following questions can sometimes help with the decision to decide.

◀ Questions on decision immediacy

- *What really matters?* Small and less significant problems should not get the same time and attention as bigger ones.
- *Might the problem resolve itself?* Putting problems in rank order leaves the less significant for last. Surprisingly, many of these less important problems resolve themselves or are solved by others before you get to them.
- *Is this my, or our, problem?* Many problems can be handled by other people. These should be delegated to people who are best prepared to deal with them. Ideally, they should be delegated to people whose work they most affect.
- *Will time spent make a difference?* A really effective decision maker recognizes the difference between problems that realistically can be solved and those that are simply not solvable.

Ethical Reasoning and Decision Making

Choices at each step in the decision-making process often have moral issues that can easily be overlooked. Figure 9.1 links the steps in the decision-making process with corresponding issues of ethical reasoning.[3] As suggested in the figure, we are advocating that

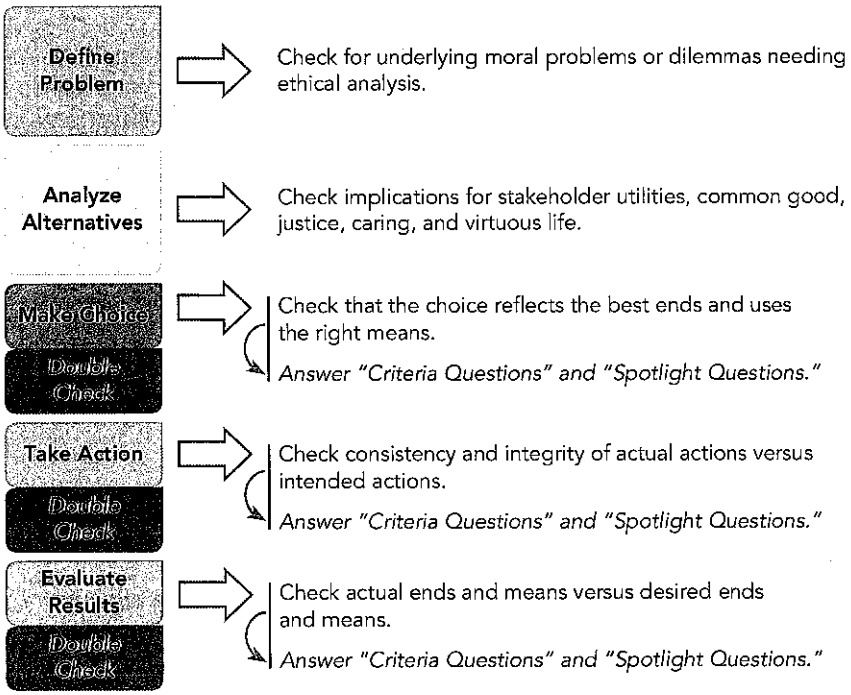


FIGURE 9.1 The decision-making process and ethical reasoning model.

an ethical reasoning approach be followed when decisions are made and that this approach be linked with steps in the decision-making process. In other words, decision making is incomplete without including ethical analysis.

Ethics is the philosophical study of morality.

Moral Problems and Dilemmas

Ethics is the philosophical study of morality or standards regarding good character and conduct.[4] When we apply ethical reasoning to decisions made by individuals and teams in organizations, the focus is on moral problems and dilemmas that are associated with the decision-making process.

A **moral problem** poses major ethical consequences for the decision maker or others.

A **moral problem** poses major ethical consequences for the decision maker or for others. It is possible to address a personal, management, or business problem and not properly consider any moral problems that might be associated with it, but the preferred approach is to carefully examine the ethics of each alternative for all stakeholders, and make choices that minimize negative impact and maximize respect for everyone's rights.

During the recession, for example, job layoffs were commonplace. For the manager or executive teams involved, layoffs may seem straightforward and necessary solutions to a business problem—there are insufficient sales to justify the payroll and some jobs must be cut. But this situation also involves a moral problem. The people who lose their jobs may have families, debts, and perhaps limited alternative job options. They will be hurt even if the business benefits from lowering its costs. Although addressing the moral problem might not change the business decision, it might change how the business decision is reached and implemented. This includes addressing whether or not better alternatives to job eliminations exist and what support is offered to those who do lose jobs.

A **moral dilemma** involves choosing among alternatives that contain both potential benefits and harm.

Sometimes decision makers face **moral dilemmas** and need to decide between two or more ethically uncomfortable alternatives. An example might be having to make the decision to sign an outsourcing contract with a less expensive supplier in a country where employment discrimination exists but where the country is poor and new jobs are necessary for economic development, or contracting a local supplier whose high cost will affect the bottom line. A situation like this involves the uncomfortable position of choosing between alternatives that contain both potential benefits and harm.

Although such moral dilemmas are difficult to resolve, ethical reasoning helps ensure that the decisions will be made with rigor and thoughtful consideration. A willingness to pause to examine the ethics of a proposed decision may well result in a better decision, preservation of respect and reputation, and avoidance of costly litigation.

Ethics Double-Checks

In the preceding example of job layoffs, business executives who have been criticized for making job cuts might scramble to provide counseling and job search help to affected employees. This is after the fact, and moral conduct does not result from after-the-fact embarrassment. As ethicist Stephen Fineman suggests, "If people are unable to anticipate shame or guilt before they act in particular ways, then moral codes are invalid."[5] When you are the decision maker, decision making is not just a process followed for the good of the organization; it involves your values and your morality, and potential adverse impact on them should be anticipated.[6]

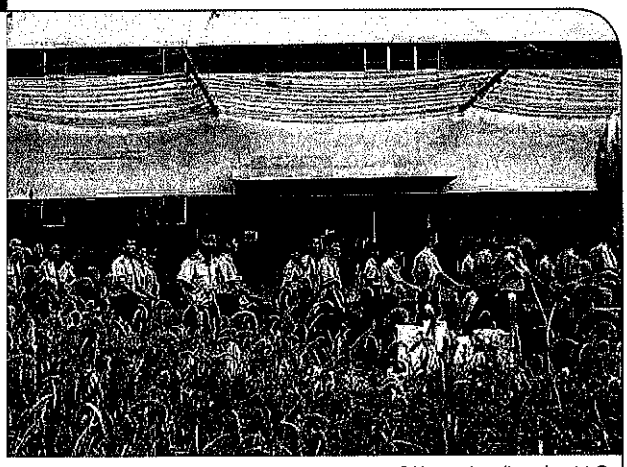
If you look at Figure 9.1, you will see that "ethics double-checks" are built into the ethical reasoning framework. This is a way of testing to make sure our decisions meet personal moral standards. The recommended ethics double-checks ask and answer two sets of questions: criteria questions and spotlight questions. Ethicist Gerald Cavanagh and his associates identify these four **criteria questions** for assessing ethics in decision making:[7]

Criteria questions assess a decision in terms of utility, rights, justice, and caring.

- *Utility*—Does the decision satisfy all constituents or stakeholders?
- *Rights*—Does the decision respect the rights and duties of everyone?
- *Justice*—Is the decision consistent with the canons of justice?
- *Caring*—Is the decision consistent with my responsibilities to care?

CHECKING ETHICS IN OB

Life and Death at an Outsourcing Factory



REUTERS/Jason Lee/Landov LLC

Over 500,000 people work, and many employees live in dormitories, at the huge Foxconn complex in Shenzen, China that includes its own downtown, swimming pool, fire department and hospital. The company is not only known as a major outsourcing firm that makes products for Apple, Dell and Hewlett Packard, among others, but for labor unrest, industrial accidents and worker suicides.

Most workers are young and away from their homes for the first time. "Without their families," says a supervisor, "they're left without direction." The firm has been criticized for working conditions and labor practices that led to a rash of employee suicides. At one point the firm installed netting on the dormitories to prevent suicides by workers jumping from the roofs.

One Foxconn worker complains that the work is meaningless, no conversation is allowed on the production lines, and the bathroom breaks are limited. Another says, "I do the same things every day. I have no future."

In recent years, Foxconn has been working to improve conditions for workers and increase their pay. A supervisor points out that the firm provides counseling services. "We try to provide them with direction and help."

One Foxconn worker complains that the work is meaningless, no conversation is allowed on the production lines, and bathroom breaks are limited. Another says: "I do the same thing every day. I have no future." A supervisor points out that the firm provides counseling services since most workers are young and this is the first time they are away from their homes. "Without their families," says the supervisor, "they're left without direction. We try to provide them with direction and help."

How Should We Act? People sometimes work in situations that are harmful to their health and well being. They face abuse in the form of sexual harassment, supervisor mistreatment, co-worker incivility, unsafe conditions, overly long hours, and more. What ethical responsibilities do the firms that contract for outsourcing in foreign plants have when it comes to the conditions under which the employees work? Whose responsibility is it to make sure workers are well treated? And when it comes to consumers, should we support bad practices by continuing to buy products from firms whose outsourcing partners have been revealed to treat workers poorly?

The **spotlight questions** expose a decision to public scrutiny and force us to consider a decision in the context of full transparency.[8] They include:

Spotlight questions expose a decision to public scrutiny and full transparency.

- "How would I feel if my family found out about this decision?"
- "How would I feel if this decision were published in the local newspaper or posted on the Internet?"
- "What would the person you know or know of who has the strongest character and best ethical judgment do in this situation?"

Alternative Decision Environments

Decisions in organizations are typically made under the three conditions or environments—uncertainty, risk, and certainty—providing the decision maker with *nonprogrammed* or programmed types of decisions.[9] Combinations of these environments and types of decision

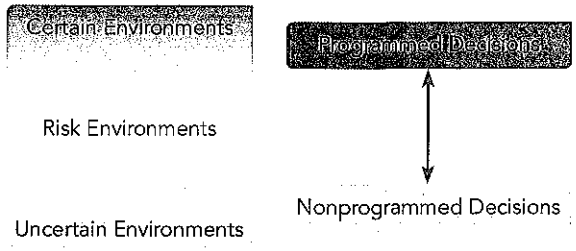


FIGURE 9.2 Combinations of decision environments and types of decisions.

are depicted in Figure 9.2. A quick examination of these combinations reveals interesting differences in the speed, accuracy, and efficiency of decision making.

Certain environments provide full information on the expected results for decision-making alternatives.

Certain Environments and Programmed Decisions

Certain environments exist when information is sufficient to predict the results of each alternative in advance of implementation. When a person invests money in a savings account, for example, absolute certainty exists about the interest that will be earned on that money in a given period of time.

Programmed decisions implement solutions that have already been determined by past experience.

Programmed decisions are choices made as standardized responses to recurring situations and routine problems. They deal with things a decision maker or team already has experience with. Although it appears the choice has been made, there remains the question of implementation and tailoring the implementation to the exact problem at hand. For instance, even programmed decisions that deal with employee absences, compensation, or other standard human resource issues call for care in implementation.

The combination of a certain decision environment and programmed decisions appears trivial because it represents well established standard operating practice in a well-known setting. Choices should be activated when a choice is made for fast, accurate, and efficient choices. The astute manager also realizes there is an opportunity to delegate implementation, simplify decision rules, and/or investigate if new alternatives have arisen.

Uncertain environments provide no information to predict expected results for decision-making alternatives.

Uncertain Environments and Nonprogrammed Decisions

Uncertain environments exist when managers have so little information that they cannot even assign probabilities to various alternatives and their possible outcomes. This is the most difficult decision environment. As we will see in the rest of this chapter, uncertainty forces decision makers to rely heavily on unique, novel, and often totally innovative alternatives. This environment calls on managers to use their intuition, educated guesses, and even hunches to develop nonprogrammed decisions.

Nonprogrammed decisions are created to deal with a unique problem or opportunity at hand.

Nonprogrammed decisions are specifically crafted or tailored to fit a unique situation. They address novel or unexpected problems that demand a special response—one not available from a decision inventory. An example is a marketing team that has to respond to the introduction of a new product by a foreign competitor. Although past experience may help deal with this competitive threat, the immediate decision requires a creative solution based on the unique characteristics of the present market situation.

Risk environments provide probabilities regarding expected results for decision-making alternatives.

Risk Environments and Programmed Decisions

Risk environments exist when decision makers are aware of the probabilities associated with their likely occurrence. Decision makers often attempt to eliminate uncertainty by assigning probabilities to alternatives. The assignment can be made through objective statistical

More Employers Use Computer Programs to Take the Guesswork Out of Hiring

Frances M. Roberts/NewsCom

It used to be that managers and human resource staffers followed job candidates from the point of application through the interview and into final job placement. Things are changing—fast. Computer software is replacing the human being in some aspects of hiring decisions. All call-center jobs at Xerox, for example, are filled by software that screens applications and responses to key job-related questions.

Software is often used to scan résumés for key words and phrases that are linked to the employer's hiring preferences. Personalities and decisions in simulated situations can easily be assessed by a variety of programs that organize the data and assign applicants to action categories such as *reject, hire,* and *consider further.* It's all part of what is called "talent management software." Users find that it takes the "hunch" factor out of hiring decisions and makes everything more data based.

procedures or through personal intuition. For instance, a senior production manager can make statistical estimates of quality rejects in production runs or make similar estimates based on personal past experience. Managers believe risk is a common decision environment.

In risk environments, decision makers often implement programmed decisions to gain speed and the appearance of efficiency. However, to the degree that the risk is manufactured from managerial estimates of conditions that are really uncertain, the accuracy of the choices could decline substantially.

Decision Environment and Decision Type Mismatches The presence of unusual combinations of decision environments and types signals potentially serious decision-making deficiencies. When organizations rely on unprogrammed decisions in certain and risk environments, there is a potential loss of efficiency. Conversely, use of programmed decisions in an uncertain environment often fails because choices made don't solve the problem or match the opportunity. The use of programmed decisions in uncertain environments is perhaps more common than you might first think. This combination indicates that decision makers are unresponsive to changing, dynamic conditions.

Decisions with Extreme Consequences

Where the potential consequences of a decision are extreme, organizations often engage in planning to ensure their survival. One common type of planning involves systematic risk management and another focuses on responses to potential disasters.

Risk Management in Decision Making Because so many decisions are made in risk and uncertain environments, there is heightened interest in **risk management**, often associated with insurance and finance. We use the term in general management as well, focusing on anticipating risk in situations and factoring risk alternatives into the decision-making process.[10] Risk management involves identifying critical risks and then developing strategies and assigning responsibilities for dealing with them.

Risk managemen involves anticipating risks and factoring them into decision making.

KPMG, one of the world's largest consulting firms, has a large practice in enterprise risk management. It is designed to help executives identify risks to their firms and plan how to best deal with them.[11] KPMG consultants systematically ask managers to

separately identify *strategic risks*—threats to overall business success; *operational risks*—threats inherent in the technologies used to reach business success; and *reputation risks*—threats to a brand or to the firm's reputation. Although they also note the importance of threats from regulatory sources, KPMG consultants pay special attention to financial threats, challenges to information systems, and new initiatives from competitors, in addition to change in the competitive setting such as economic recession or natural disasters.

A **crisis decision** occurs when an unexpected problem can lead to disaster if not resolved quickly and appropriately.

Crisis Planning The most extreme type of nonprogrammed decision is the **crisis decision** where an unexpected problem threatens major harm and disaster if it is not resolved quickly and appropriately.[12] Acts of terrorism, workplace violence, IT failures and security breaches, ethical scandals, and environmental catastrophes are all examples. The ability to handle crises could well be the ultimate decision-making test. Unfortunately, research indicates that we sometimes react to crises by doing exactly the wrong things.[13] Managers err in crisis situations when they isolate themselves and try to solve the problem alone or in a small, closed group. Teams do the same when they withdraw into the isolation of groupthink. In both instances, the decision makers cut themselves off from access to crucial information at the very time that they need it most.

Especially in our world of economic uncertainty, global crises, and IT security breaches, many organizations are developing formal crisis-management programs. They train managers in crisis, assign people to crisis-management teams, and develop crisis-management plans to deal with various contingencies. Just as fire and police departments, the Red Cross, and community groups plan ahead and train people how to best handle civil and natural disasters, and airline crews train for flight emergencies, so, too, can managers and work teams plan ahead and train to handle organizational crises. These preparedness programs often stress key points like the following on how to identify and respond to a crisis:[14]

Crisis preparedness tips ▶

1. Take the time to understand what's happening and the conditions under which the crisis must be resolved.
2. Attack the crisis as quickly as possible, before it gets unmanageable.
3. Know when to back off and wait for a better opportunity to make progress with the crisis.
4. Understand the danger of all-new territory.
5. Value the skeptic—don't look for and get too comfortable with agreement. Appreciate skeptics and let them help you see things differently.
6. When things are going wrong and no one seems to care, you may have to start a crisis to get people's attention.

Decision-Making Models

LEARNING ROADMAP CLASSICAL DECISION MODEL • BEHAVIORAL DECISION MODEL SYSTEMATIC AND INTUITIVE THINKING

Historically, field of organizational behavior has emphasized two alternative approaches to decision making as shown in Figure 9.3—classical and behavioral.[15] The classical decision model views rational people acting in a world of complete certainty, whereas the behavioral decision model accepts the notion of bounded rationality and suggests that people act only in terms of what they perceive about a given situation.

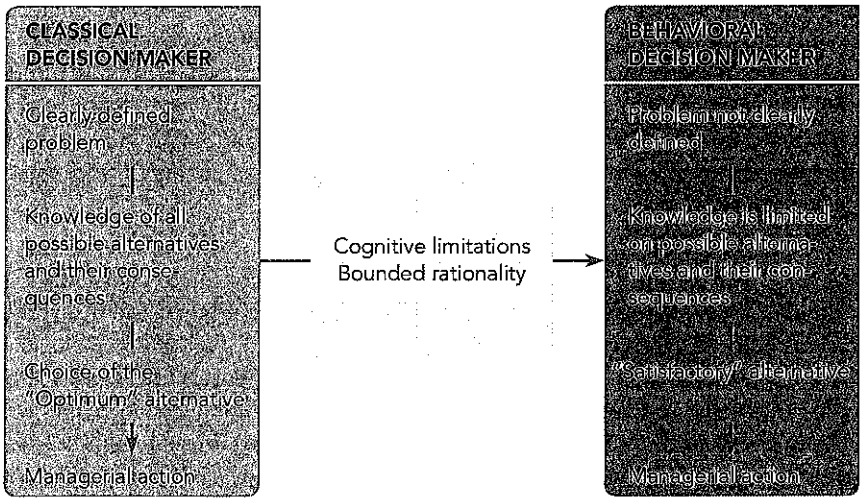


FIGURE 9.3 Decision making viewed from the classical and behavioral perspectives.

Classical Decision Model

The **classical decision model** views the manager or team as acting rationally and in a fully informed manner. In a certain environment, the problem is clearly defined, all possible action alternatives are known, and their consequences are clear. This allows for an **optimizing decision** that gives the best solution to the problem. This model fits the five-step decision-making process described earlier. It is an ideal situation of complete information where the decision maker moves through the steps one by one in a logical fashion. And it nicely lends itself to various forms of quantitative decision analysis as well as to computer-based applications.[16]

Classical decision model views decision makers as acting in a world of complete certainty.

Optimizing decisions give the absolute best solution to a problem.

Behavioral Decision Model

As Nobel laureate Herbert Simon noted, the reality is that many, perhaps most, decision situations faced by individuals and teams in organizations don't fit the assumptions of the model. Recognizing this, the premise of the alternative **behavioral decision model** is that people act only in terms of their perceptions, which are frequently imperfect.[17]

The **behavioral decision model** views decision makers as acting only in terms of what they perceive about a given situation.

Behavioral scientists recognize that human beings have *cognitive limitations*—limits on what we are able to know at any point in time. These limitations restrict our information-processing capabilities. The result is that information deficiencies and overloads compromise the ability of decision makers to operate according to the classical model. Instead, they end up acting with *bounded rationality*, where things are interpreted and made sense of as perceptions and only within the context of the situation. They engage in decision making within the box of a simplified view of a more complex reality.

Armed with only partial knowledge about the available action alternatives and their consequences, decision makers in the behavioral model are likely to choose the first alternative that appears satisfactory to them. Herbert Simon calls this the tendency to make **satisficing decisions**. He states, "Most human decision making, whether individual or organizational, is concerned with the discovery and selection of satisfactory alternatives; only in exceptional cases is it concerned with the discovery and selection of optimal decisions."[18]

Satisficing decisions choose the first alternative that appears to give an acceptable or satisfactory resolution of the problem.

WORTH CONSIDERING ...OR BEST AVOIDED?

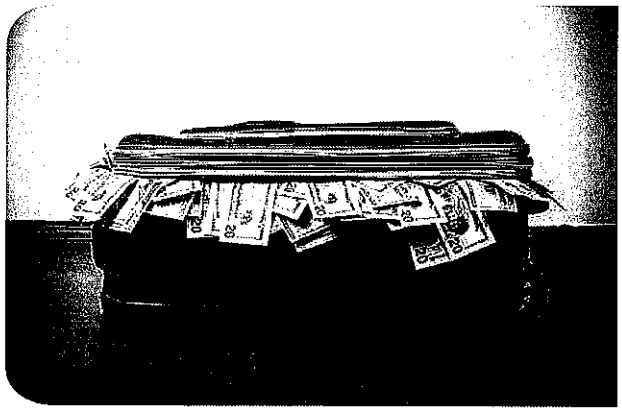
Need a Break? Some Workers Are Swapping Cash for Time

If employers offer vacation, sick and personal days as incentives to employees, will allowing workers to either buy more time off or sell back unused days motivate them even more?

USAA is one of America's largest financial services companies and is consistently ranked as one of the best places to work. At last count 48 percent of the firm's employees had taken advantage of the opportunity to purchase additional time off. The Society for Human Resource Management reports that these programs are gaining popularity, with some 51 percent of organizations offering the option.

On the other hand, many employees don't use all their vacation or personal days. While the average U.S. employee gets 2.6 weeks of vacation each year, research firm Harris Interactive notes that 57 percent don't use all of their days. Selling unused days is a way for many to boost their paycheck.

Most plans that allow purchasing of time off use payroll deductions to make the financial impact less painful. At the building-materials maker USG, the program became so popular that management had to limit the purchases of vacation time to a maximum of one week a year.



Muharrem Oner/iStockphoto

Do the Analysis

Does it make sense that workers should be able to sell back and buy more time off? Does the practice hold up to real scrutiny? Are there disadvantages that must be considered? Can the practice be justified in terms of employee motivation and engagement? What is the cost of workers not taking enough vacation time?

Systematic and Intuitive Thinking

Individuals and teams may be described as using both comparatively slow "systematic" and quick "intuitive" thinking as they make decisions and try to solve problems. **Systematic thinking** is consistent with the rational model where a decision is approached in step-by-step and analytical fashion. You might recognize this style in a team member who tries to break a complex problem into smaller components that can be addressed one by one. Teams engaged in systematic thinking will try to make a plan before taking action, and to search for information and proceed with problem solving in a fact-based and logical fashion. Systematic thinking is also known as an analytical approach and is often recommended for superior decision making.[19]

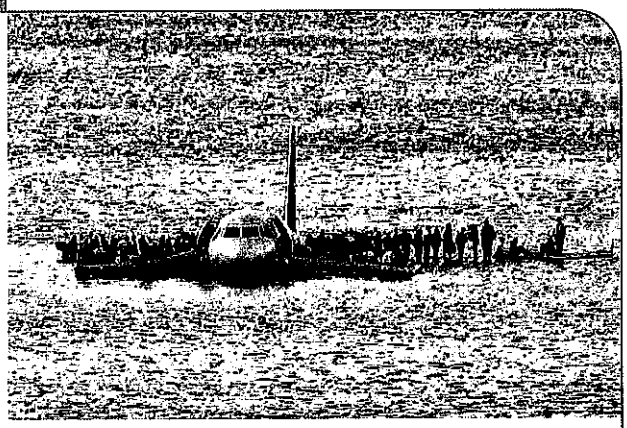
Systematic thinking approaches problems in a rational and analytical fashion.

We think of *intuition* as the ability to know or recognize quickly and readily the possibilities of a given situation.[20] Individuals and teams using **intuitive thinking** are more flexible and spontaneous in decision making.[21] You might observe this pattern in someone who always seems to come up with an imaginative response to a problem, often based on a quick and broad evaluation of the situation. Decision makers in this intuitive mode tend to deal with many aspects of a problem at once, search for the big picture, jump quickly from one issue to another, and act on hunches from experience or on spontaneous ideas. This approach is common under conditions of risk and uncertainty. Because intuitive thinkers take a flexible and spontaneous approach to

Intuitive thinking approaches problems in a flexible and spontaneous fashion.

OB IN POPULAR CULTURE

Intuition and US Airways Flight 1549



Steven Day/© AP/Wide World Photos

During the afternoon of January 15, 2009, television news anchors began reporting about a plane in the Hudson River. The first reaction was "not another tragic plane crash." This incident, however, was different. Captain Chesley "Sully" Sullenberger successfully crash-land US Airways Flight 1549 in the river and save the lives of all passengers and crew.

In an interview with Greta van Susteren of Fox News, Sullenberger was asked to recount what happened. van Susteren commented, "It probably took about twenty seconds to explain; you had to make that decision like [snaps her fingers] that." Sullenberger responded, "It was sort of an instinctive move based upon my experience and my initial read of the situation."

What Captain Sullenberger describes is an intuitive decision. Think about it. If you had been a passenger on that plane, would you want him making a systematic decision under those circumstances? The plane would have been at the bottom of the Hudson River by the time he completed step 2. This is precisely why pilots spend considerable time in flight simulators: to develop the experience necessary for dealing with problems that may only occur once, if ever, in a career.

Most descriptions of the decision-making process begin with the rational model. Systematic or rational thinking is often viewed as the most effective way to make decisions. By contrast, intuition involves being able to quickly size up a situation and make a decision. In some situations, like Sullenberger's, it may be a better way to approach a problem.

Get to Know Yourself Better Take a look at Assessment 16, Intuitive Ability, in the *OB Skills Workbook* to determine the extent to which you use intuition in decision making. If your score suggests that you are uncomfortable with an intuitive decision style, you may need to work on it. Or perhaps you may simply need to rely on your experience and trust your judgment a little more.

decision making, their presence on a team adds potential for creative problem solving and innovation.

When US Airways Flight 1549 hit a flock of birds on takeoff from LaGuardia Airport, lost engine power, and was headed for a crash, Pilot Chesley "Sully" Sullenberger III made the decision to land in the Hudson River. The landing was successful, and no lives were lost. Called a hero for his efforts, Sullenberger described his thinking this way.[22]

> *I needed to touch down with the wings exactly level. I needed to touch down with the nose slightly up. I needed to touch down at . . . a descent rate that was survivable. And I needed to touch down just above our minimum flying speed but not below it. And I needed to make all these things happen simultaneously.*

Sullenberger did the right thing—he made the decision himself, betting on his training and experience and, stood behind it with his own life on the line.

Research Insight

Analytical and Intuitive Decisions: When to Trust Your Gut

Traditionally, managers have often been advised not to use intuitive decision making because it is often biased and may yield poor decisions. Managers have been advised by decisions experts to use analytical decision making. However, Dane and his colleagues noted recent work suggesting that this traditional recommendation might not hold for very experienced decision makers. For these individuals, intuitive heuristics might foster effective decision making.

The review of the literature suggested that intuition-based decision making might work well for experts facing tasks that could not be broken down into component parts. As they noted, "Experts are well equipped to capitalize on the potential benefits of intuition because they possess . . . domain knowledge that foster[s] rapid . . . accurate" choices.

To test this theory, the authors conducted a series of lab experiments. In the first experiment, the researchers asked student subjects to rate the difficulty of basketball shots. First, they took photos from a recent game of basketball players taking shots. They asked coaches to rate the difficulty of these shots on a scale of one to ten. Then they gathered the student participants. The student participants were first separated into two groups: one group had expensive experience with basketball (e.g., played three years of high school basketball) and the other did not. For each experience group, some students were asked to develop an analytic model with specific factors (e.g., the closeness of the defender) to make judgments about difficulty. The other students were asked to use their intuition. They then ran the experiment, giving all the students a limited amount of time to make the choices. So who do you think had the higher scores?

Results of the Basketball Experiment

	Intuition Used	Analysis Used
Low Expertise	21.34*	24.89
High Expertise	30.09	26.46

* Higher score is better.

It turns out that the individuals with the highest scores were the students who had played basketball and used intuition. The lowest scores came from the students without basketball expertise who used intuition.

The researchers also ran a similar test with fake versus real designer brand handbags. Here, the experts were students who owned several of the real bags versus those who did not. The results were virtually identical. They noted that their results might not hold for tasks, such as sequential statistical problems, that were decomposable.

Do the Research **How much expertise do you think is necessary for intuition to be superior? Design a study with a non-decomposable task to examine this question.**

Source: Erik Dane, Kevin W. Rockmann, and Michael G. Pratt, "When Should I Trust My Gut? Linking Domain Expertise to Intuitive Decision-Making Effectiveness," *Organizational Behavior and Human Decision Processes* 119 (2012), pp. 187–194.

Does this mean that we should always favor the more intuitive and less systematic approach? Most likely not—teams, like individuals, should use and combine the two approaches to solve complex problems. In other words, there's a place for both systematic and intuitive thinking in management decision making.

Decision-Making Traps and Issues

LEARNING ROADMAP JUDGMENTAL HEURISTICS • DECISION BIASES KNOWING WHEN TO QUIT • KNOWING WHO TO INVOLVE

The pathways to good decisions can seem like a minefield of challenging issues and troublesome traps. Whether working individually or as part of a team, it is important to understand the influence of judgmental heuristics and other potential decision biases, as well as be capable of making critical choices regarding if, when, and how decisions get made.

Judgmental Heuristics

Judgment, or the use of intellect, is important in all aspects of decision making. When we question the ethics of a decision, for example, we are questioning the judgment of the person making it. Work by Nobel laureate Daniel Kahneman, his colleagues, and many others shows that people are prone to mistakes and biases that often interfere with the quality of decision making.[23] Many of these mistakes and biases can be traced back to the use of **heuristics**. Heuristics serve a useful purpose by making it easier to deal with uncertainty and the limited information common to problem situations. However, they can also lead us toward systematic errors that affect the quality, and perhaps the ethical implications, of any decisions made.[24]

Heuristics are simplifying strategies or "rules of thumb" used to make decisions.

Availability Heuristic

The **availability heuristic** involves assessing a current event based on past occurrences that are easily available in one's memory. An example is the product development specialist who decides not to launch a new product because of a recent failure launching another one. In this case, the existence of a past product failure has negatively, and perhaps inappropriately, biased judgment regarding how best to handle the new product.

The **availability heuristic** bases a decision on recent events relating to the situation at hand.

Representativeness Heuristic

The **representativeness heuristic** involves assessing the likelihood that an event will occur based on its similarity to one's stereotypes of similar occurrences. An example is the team leader who selects a new member, not because of any special qualities of the person but because the individual comes from a department known to have produced high performers in the past. In this case, the individual's current place of employment—not job qualifications—is the basis for the selection decision.

The **representativeness heuristic** bases a decision on similarities between the situation at hand and stereotypes of similar occurrences.

Anchoring and Adjustment Heuristic

The **anchoring and adjustment heuristic** involves assessing an event by taking an initial value from historical precedent or an outside source and then incrementally adjusting this value to make a current assessment. An example is the executive who makes salary increase recommendations for key personnel by simply adjusting their current base salaries by a percentage. In this case, the existing base salary becomes an "anchor" that limits subsequent salary increases. This anchor may be inappropriate, such as in the case of an individual whose market value has become substantially higher than what is reflected by the base salary plus increment approach.

The **anchoring and adjustment heuristic** bases a decision on incremental adjustments to an initial value determined by historical precedent or some reference point.

Decision Biases

In addition to the common judgmental heuristics, decision makers are also prone to more general biases in decision making. One bias is **confirmation error**, whereby the decision maker seeks confirmation for what is already thought to be true and neglects opportunities to acknowledge or find disconfirming information. A form of selective perception, this bias involves seeking only information and cues in a situation that support a preexisting opinion.

The **confirmation error** is the tendency to seek confirmation for what is already thought to be true and not search for disconfirming information.

A second bias is the **hindsight trap** where the decision maker overestimates the degree to which he or she could have predicted an event that has already taken place. One risk of hindsight is that it may foster feelings of inadequacy or insecurity in dealing with future decision situations.

The **hindsight trap** is a tendency to overestimate the degree to which an event that has already taken place could have been predicted.

A third bias is the **framing error**. It occurs when managers and teams evaluate and resolve a problem in the context in which they perceive it—either positive or negative. Suppose research data show that a new product has a 40 percent market share. What does this really mean to the marketing team? A negative frame views the product as deficient because it is missing 60 percent of the market. Discussion and problem solving

Framing error is solving a problem in the context perceived.

BRINGING OB TO LIFE

"Only 51 percent of new hires end up thinking they made the right decision. The main reason is that they had unrealistic expectations about the job."

Getting Real to Make the Right Job Choice

OB scholars have long talked about the importance of realistic recruitment or realistic job previews. Recruiters should provide job candidates with all relevant information about the prospective job and employer, including the possible downsides. This helps the candidates make better job choice decisions, avoiding job frustration and saving employers the cost of hiring again.

Injecting realism into job choice decisions makes good sense, but it's not the norm. A survey by Development Dimensions International, Inc. (DDI), reports that only 51 percent of new hires think they made the right decision. Unrealistic expectations and disengagement cause some employees to want out.

In the DDI survey of 2,300 new hires, many said they missed important information during the recruiting process. In retrospect, they would have liked answers to questions like these before accepting the job:

- What is the turnover rate? How often are you hiring for this position?
- How much travel is required, and what type of travel will it be?
- What are the actual hours of work, not just the official ones?
- How solid are the finances of this organization?
- Can I see the actual job description—the one my manager would be using?
- What is the structure of the team I will be joining, and how does it operate?
- Are there any team dynamics among existing members that I should know about?

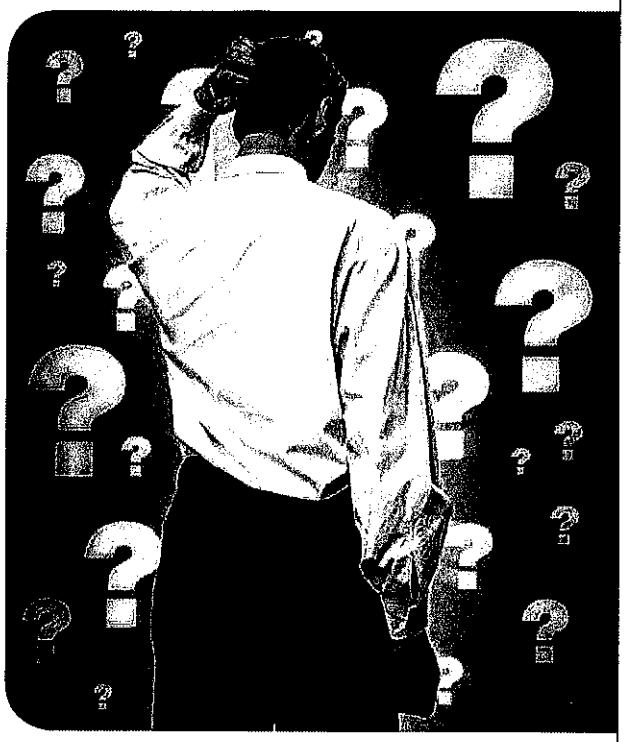


Image Source/Corbis

From the OB point of view, everyone benefits from realistic recruiting. New hires who believe their decisions were fully informed are more likely to feel good about their new jobs. Employers providing full information are more likely to hire engaged workers who stick around. So, why do the gaps revealed in the DDI data persist? Why aren't more recruiters following OB and being fully open and transparent with job candidates?

within this frame would likely focus on "What are we doing wrong?" If the marketing team used a positive frame and considered a 40 percent share as a success, the conversation might have been quite different: "How can we do even better?" By the way, we are constantly exposed to framing in the world of politics; the word used to describe it is *spin*.

Knowing When to Quit

After the process of making a decision is completed and implementation begins, it can be hard for decision makers to change their minds and admit they made a mistake even when things are clearly not going well. Instead of backing off, the tendency is to press on

to victory. This is called **escalating commitment**—continuing and renewing efforts on a previously chosen course of action, even though it is not working.[25] The tendency toward escalating commitment is reflected in the popular adage "If at first you don't succeed, try, try again."

Escalating commitment is the tendency to continue a previously chosen course of action even when feedback suggests that it is failing.

Escalating commitments are a form of decision entrapment that leads people to do things that the facts of a situation do not justify. This is one of the most difficult aspects of decision making to convey to executives because so many of them rose to their positions by turning losing courses of action into winning ones.[26] Managers should be proactive in spotting "failures" and more open to reversing decisions or dropping plans that are not working. But this is easier said than done.

The tendency to escalate commitments often outweighs the willingness to disengage from them. Decision makers may rationalize negative feedback as a temporary condition, protect their egos by not admitting that the original decision was a mistake, or characterize any negative results as a "learning experience" that can be overcome with added future effort.

Perhaps you have experienced an inability to call it quits or been on teams with similar reluctance. It's hard to admit to a mistake, especially when a lot of thought and energy went into the decision in the first place; it can be even harder when one's ego and reputation are tied up with the decision. Fortunately, researchers suggest the following to avoid getting trapped in escalating commitments:

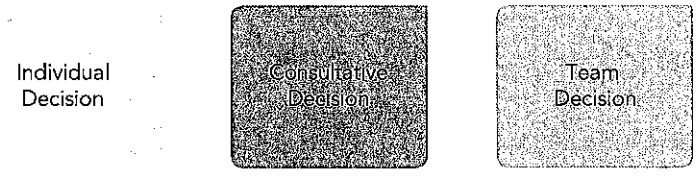
◀ How to avoid escalating commitment

- Set advance limits on your involvement and commitment to a particular course of action; stick with these limits.
- Make your own decisions; don't follow the lead of others because they are also prone to escalation.
- Carefully determine just why you are continuing a course of action; if there are insufficient reasons to continue, don't.
- Remind yourself of the costs of a course of action; consider saving these costs as a reason to discontinue.

Knowing Who to Involve

In practice, good organizational decisions are made by individuals acting alone, by individuals consulting with others, and by people working together in teams.[27] In true contingency fashion, no one option is always superior to the others; who participates and how decisions are to be made should reflect the issues at hand.[28]

Three Scenarios for Successful Decision Making



Individual decisions, or authority decisions, are made by one person on behalf of the team.

Consultative decisions are made by one individual after seeking input from or consulting with members of a group.

Team decisions are made by all members of the team.

When **individual decisions**, also called *authority decisions*, are made, the manager or team leader uses information gathered and decides what to do without involving others. This decision method assumes that the decision maker is an expert on the problem at hand. In **consultative decisions**, by contrast, inputs are gathered from other persons and the decision maker uses this information to arrive at a final choice. In **team decisions**, group members work together to make the final choice, hopefully by consensus or unanimity.

Problem Attributes		Manager's Questions
QR	Quality requirement	How important is the technical quality of this decision?
CR	Commitment requirement	How important is team member commitment to the decision?
LI	Leader's information	Do you have sufficient information to make a high-quality decision?
ST	Problem structure	Is the problem well structured?
CP	Commitment probability	If you were to make the decision by yourself, is it reasonably certain that team members would be committed to the decision?
GC	Goal congruence	Do team members share the organizational goals to be attained in solving this problem?
CO	Member conflict	Is conflict among team members over preferred solutions likely?
SI	Member information	Do team members have sufficient information to make a high-quality decision?

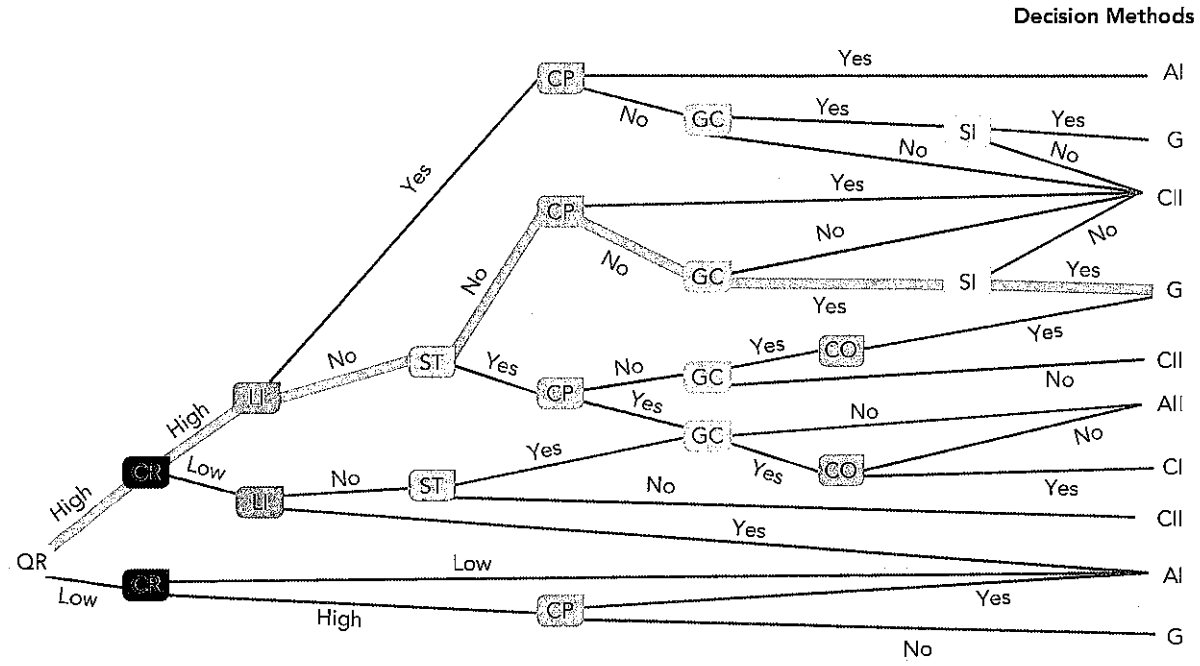


FIGURE 9.4 The Vroom-Jago model for a manager's use of alternative decision-making methods.

Victor Vroom, Phillip Yetton, and Arthur Jago developed the framework shown in Figure 9.4 for helping managers choose the right decision-making methods for various problem situations.[29] They identify these variants of the individual, consultative, and team decision options just described.

- *AI (first variant on the authority decision):* The manager solves the problem or makes the decision alone, using information available at that time.
- *AII (second variant on the authority decision):* The manager obtains the necessary information from team members and then decides on the problem's solution. The team members provide the necessary information but do not generate or evaluate alternatives.
- *CI (first variant on the consultative decision):* The manager shares the problem with team members individually, getting their ideas and suggestions without bringing them all together. The manager then makes a decision.

- *CII (second variant on the consultative decision):* The manager shares the problem with team members, collectively obtaining their ideas and suggestions. The manager then makes a decision.
- *G (the team or consensus decision):* The manager shares the problem with team members as a total group and engages them in consensus seeking to arrive at a final decision.

Figure 9.4 is a decision tree developed from the research of Vroom and his colleagues. Though complex, it helps to illustrate how decision makers can choose among the individual, consultative, and team decision options by considering these factors: (1) required quality of the decision, (2) commitment needed from team members to implement the decision, (3) amount of information available to the team leader, (4) problem structure, (5) chances team members will be committed if the leader makes the decision, (6) degree to which the team leader and members agree on goals, (7) conflict among team members, and (8) information available to team members.

Consultative and team decisions are recommended by this model when the leader lacks sufficient expertise and information to solve this problem alone; the problem is unclear and help is needed to clarify the situation; acceptance of the decision and commitment by others are necessary for implementation; and adequate time is available to allow for true participation. By contrast, authority decisions work best when team leaders have the expertise needed to solve the problem; they are confident and capable of acting alone; others are likely to accept and implement the decision they make; and little or no time is available for discussion. When problems must be resolved immediately, the authority decision made by the team leader may be the only option.[30]

Creativity in Decision Making

LEARNING ROADMAP PERSONAL CREATIVITY DRIVERS • TEAM CREATIVITY DRIVERS

Whether the choice is to make an individual decision, consult with others, or ask team members to work together, effective decision making often calls for creativity. **Creativity** is the generation of a novel idea or unique approach to solving performance problems or exploiting performance opportunities.[31] It often determines how well people, teams, and organizations do in response to complex challenges.[32]

Creativity generates unique and novel responses to problems.

Interestingly, researchers studying creativity rarely suggest that teams and organizations lack the potential for novel ideas or unique approaches. Yet, they also recognize that true creativity is rare. The critical question for a manager is how to turn the potential for creativity into real performance. The answer to this question rests with the individual team members, as well as the team and organizational context in which they are asked to perform.

Personal Creativity Drivers

One source of insight into personal creativity drivers is the three-component model of task expertise, task motivation, and creativity skills shown in Figure 9.5.[33]

Creative decisions are more likely to occur when a person has a lot of *task expertise.* Creativity typically extends a skill one is already good at in a new direction. Creative decisions are also more likely when the people making them are high in *task motivation.* Creativity happens in part because people work exceptionally hard to resolve a problem

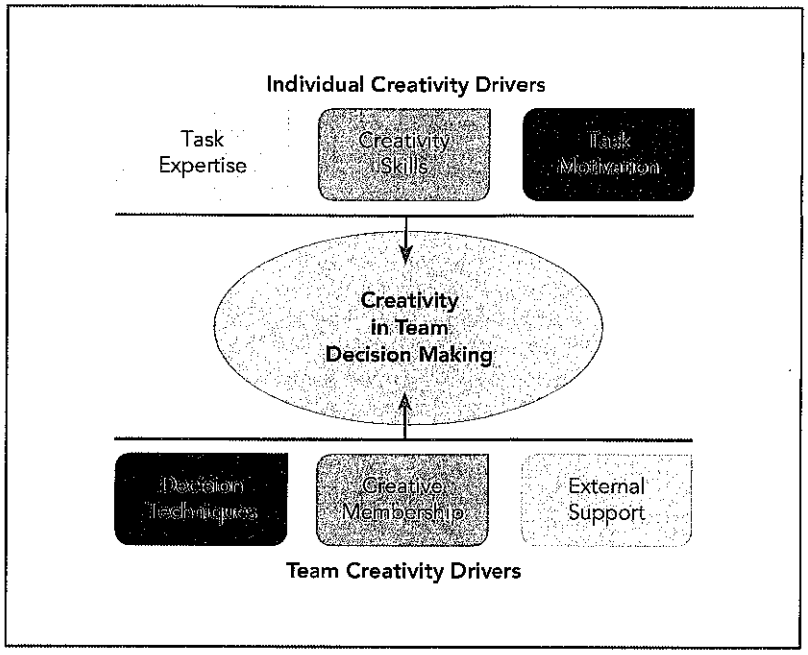


FIGURE 9.5 Individual and team creativity drivers.

or exploit an opportunity. Also, creative decisions are more likely when the people involved have strong creativity skills such as the following:[34]

Individual creativity skills ▶

- Work with high energy
- Hold ground in face of criticism
- Accept responsibility for what happens
- Are resourceful even in difficult situations
- Are both systematic and intuitive
- Are objective—step back and question assumptions
- Use divergent thinking—think outside of the box
- Use convergent thinking—synthesize and find correct answers
- Use lateral thinking—look at diverse ways to solve problems
- Transfer learning from one setting to others

Team Creativity Drivers

If you mix creative people together on a team, will you get creative results? Not necessarily.[35] Yes, the basic building block of team creativity is membership composition. If we want teams to be creative, they should be staffed with a *creative membership*. But beyond this, the use of special *decision techniques* such as brainstorming and the nominal group technique discussed in Chapter 8 can also be helpful. This is especially true when a team encounters process problems. Some useful decision making techniques teams can use to unleash their creativity include the following:[36]

Techniques for team creativity ▶

- *Associative play*—making up and telling stories, engaging in art projects, and building toy models that come to mind when dealing with a problem
- *Cross-pollination*—switching members among teams to gain insights from diverse interests, backgrounds, and experiences when working on problems
- *Analogies and metaphors*—using analogies and metaphors to describe a problem and open pathways to creative thinking

FINDING THE LEADER IN YOU

Arianna Russell Leads with Intuition at the Bodacious Bandit

Frustrated with the limited options of attractive and durable iPhone cases, Arianna Russell, a twenty-something entrepreneur, knew she could do better and decided to start her own business—Bodacious Cases—and created the 100% made in America, Band-It Case.

Russell wants to do more than save your iPhone from a devastating drop or a dunk in the water. She decided her iPhone cases should be attractive, practical and sturdy. As Yahoo! News reported, she "wanted . . . something truly bodacious. . . . with the Band-It Case, you have the best of several cases combined into one. It's sleek, thin, durable, and water-resistant."

The two piece, snap-together polycarbonate case was designed with an interchangeable colored band for protection and style. Standard features were not enough for Arianna, however. The iPhone case also holds a couple of credit cards and cash, and is super durable. And as a tribute to her father, a veteran, and all who have served in the military, it is made in the USA.

Bodacious Cases come in six brilliant colors with twelve different color changeable bands allowing users to match a combination of case and band to fit almost any outfit, mood, or even team or school colors. And the cases are super tough. On the company's web site you can pull up a video of Russell dumping a pitcher of water on the case, or pounding it with a croquet mallet. At the end of the video the iPhone is, of course, still working.

As for cost of manufacturing the cases, did Russell make a bad decision when she decided to produce her product in the USA? Most likely she would have saved money by outsourcing to another country, but Arianna did not even consider subcontracting or manufacturing abroad. During a holiday season interview with ABC's Diane Sawyer, the purchase of Bodacious Cases was touted as a patriotic purchase and the response was so great that Bodacious.com crashed due to overwhelming demand.

Arianna Russell

What's the Lesson Here?

Arianna's choices were intuitive and made without the traditional customer surveys, marketing analyses, or cost-benefit analyses. Did she make the right choice when deciding to manufacture her cases in the US?

Even with the right members and decision techniques available, the full creative potential of a team can only be unlocked when *external support* is added to the mix. At one level this involves making creativity a strategic priority in the broader organizational context. It also involves smaller, more everyday matters that are easily missed. Team creativity is enhanced by leaders who have the patience to allow creative processes time to work themselves through a decision situation. It is also enhanced by top management that is willing to provide the resources—technology, opportunity, and space, for example—that are helpful to the creative processes.

Think creativity nurtured the next time you see a young child playing with a unique toy. It may be from Fisher-Price toys, part of Mattel, Inc. In the firm's headquarters you'll find a special place called the "cave," and it's not your typical office space. Picture beanbag chairs, soft lighting, casual seats, and couches. It's a place for brainstorming where designers, marketers, engineers, and others can meet and join in freewheeling to come up with the next great toy for preschoolers. Consultants recommend that such innovation spaces be separated from the normal workplace and be large enough for no more than fifteen to twenty people.[37]

9 Study Guide

Key Questions and Answers

What is involved in the decision-making process?

- Decision making is a process of identifying problems and opportunities and choosing among alternative courses of action for dealing successfully with them.
- The steps in the decision-making process are (1) find and define the problem, (2) generate and evaluate alternatives, (3) decide on the preferred course of action, (4) implement the decision, and (5) evaluate the results.
- Ethical reasoning should be used in the decision-making process to ensure that all possible moral problems and dilemmas are dealt with properly.
- Decisions in organizations are made under conditions of certainty, risk, and uncertainty; the challenges to the decision maker are higher in risk and uncertain environments.
- Routine problems can be dealt with by programmed decisions; nonroutine or novel problems require specially crafted nonprogrammed decisions; crisis problems occur unexpectedly and can lead to disaster if not handled properly.

What are the alternative decision-making models?

- In the classical decision model, optimum decisions identifying the absolute best choice are made after analyzing with full information all possible alternatives and their consequences.
- In the behavioral decision model, satisficing decisions that choose the first acceptable alternative are made with limited information and bounded rationality.
- In the intuitive model, decision makers deal with many aspects of a problem at once, jump quickly from one issue to another, and act on hunches from experience or on spontaneous ideas.

What are the key decision-making traps and issues?

- The use of judgmental heuristics, or simplifying rules of thumb, can lead to biased results in decision making; such heuristics include availability decisions based on recent events, representativeness decisions based on similar events, and anchoring and adjustment decisions based on historical precedents.
- Other sources of decision-making bias are confirmation error, seeking information to justify a decision already made; hindsight trap, overestimating the extent to which current events could have been predicted; and framing error, viewing a problem in a limited context.
- Individuals and teams must know when to make decisions, realizing that not every problem requires an immediate decision.
- Individuals and teams must know who should be involved in making decisions, making use of individual, consultative, and team decisions as needed to best fit the problems and opportunities being faced.
- Individuals and teams must be able to counteract tendencies toward escalating commitment to previously chosen courses of action that are not working; they must know when to quit and abandon a course of action.

What can be done to stimulate creativity in decision making?

- Creativity is the generation of a novel idea or unique approach to solving performance problems or exploiting performance opportunities.

- Creativity in decision making can be enhanced by personal creativity drivers that include task expertise, motivation, and individual creativity skills.
- Creativity in decision making can be enhanced by team creativity drivers that include a creative membership, helpful decision techniques, and external support for creativity.

Terms to Know

Anchoring and adjustment heuristic (p. 201)
Availability heuristic (p. 201)
Behavioral decision model (p. 197)
Certain environments (p. 194)
Classical decision model (p. 197)
Confirmation error (p. 201)
Consultative decisions (p. 203)
Creativity (p. 205)
Crisis decision (p. 196)
Criteria questions (p. 192)
Decision making (p. 190)
Escalating commitment (p. 203)
Ethics (p. 192)
Framing error (p. 201)
Heuristics (p. 201)
Hindsight trap (p. 201)
Individual decisions (p. 203)
Intuitive thinking (p. 198)
Lack-of-participation error (p. 190)
Moral dilemmas (p. 192)
Moral problem (p. 192)
Nonprogrammed decisions (p. 194)
Optimizing decision (p. 197)
Programmed decisions (p. 194)
Representativeness heuristic (p. 201)
Risk environments (p. 209)
Risk management (p. 195)
Satisficing decisions (p. 197)
Spotlight questions (p. 197)
Systematic thinking (p. 198)
Team decisions (p. 203)
Uncertain environments (p. 194)

Self-Test 9

Multiple Choice

1. After a preferred course of action has been implemented, the next step in the decision-making process is to _____.
   (a) recycle the process
   (b) look for additional problems or opportunities
   (c) evaluate results
   (d) document the reasons for the decision

2. In which environment does the decision maker deal with probabilities regarding possible courses of action and their consequences?
   (a) certain (b) risk
   (c) organized anarchy (d) uncertain

3. If a team approaches problems in a rational and analytical way, with members trying to solve them in step-by-step fashion, it is well described as a team using _____.
   (a) systematic thinking (b) intuitive thinking
   (c) escalating thinking (d) associative thinking

4. An individual or team that must deal with limited information and substantial risk is most likely to make decisions based on _____.
   (a) optimizing (b) classical decision theory
   (c) behavioral decision theory (d) escalation

5. A team leader who makes a decision not to launch a new product because the last new product launch failed is falling prey to the _____ heuristic.
   (a) anchoring
   (b) availability
   (c) adjustment
   (d) representativeness

6. The criteria questions for assessing ethics in decision making include the issue of _____, making sure that the decision satisfies the interests of all stakeholders.
   (a) utility
   (b) justice
   (c) rights
   (d) caring

7. In Vroom's decision-making model, the choice among individual and team decision approaches is based on criteria that include quality requirements, availability of information, and _____.
   (a) need for implementation commitments
   (b) size of the organization
   (c) number of people involved
   (d) position power of the leader

8. The saying "If at first you don't succeed, try, try again" is most associated with a decision-making tendency called _____.
   (a) groupthink
   (b) the confirmation trap
   (c) escalating commitment
   (d) associative choice

9. The _____ decision model views individuals as making optimizing decisions, whereas the _____ decision model views them as making satisficing decisions.
   (a) behavioral/judgmental heuristics
   (b) classical/behavioral
   (c) judgmental heuristics/ethical
   (d) crisis/routine

10. A common mistake by managers facing crisis situations is _____.
    (a) trying to get too much information before responding
    (b) relying too much on team decision making
    (c) isolating themselves to make the decision alone
    (d) forgetting to use their crisis management plan.

11. What is a possible disadvantage of choosing to make a decision by the team rather than by the individual method?
    (a) People are better informed about the reason for the decision.
    (b) It takes too long to reach a decision.
    (c) More information is used to make the decision.
    (d) It won't ever result in a high-quality decision.

12. The _____ bases a decision on similarities between the situation at hand and stereotypes of similar occurrences.
    (a) representativeness heuristic
    (b) anchoring and adjustment heuristic
    (c) confirmation trap
    (d) hindsight trap

13. The _____ bases a decision on incremental adjustments to an initial value determined by historical precedent or some reference point.
    (a) representativeness heuristic
    (b) anchoring and adjustment heuristic
    (c) confirmation trap
    (d) hindsight trap

14. The _____ is the tendency to focus on what is already thought to be true and not to search for disconfirming information.
    (a) representativeness heuristic (b) anchoring and adjustment heuristic
    (c) confirmation trap (d) hindsight trap

15. Team creativity drivers include creative members, decision techniques, and _____.
    (a) task motivation (b) task expertise
    (c) long-term goals (d) external support

Short Response

16. What are heuristics, and how can they affect individual decision making?

17. What are the main differences among individual, consultative, and team decisions?

18. What is escalating commitment, and why is it important to recognize it in decision making?

19. What questions might a manager or team leader ask to help determine which problems to deal with and in which priority?

Applications Essay

20. As a participant in a new mentoring program between your university and a local high school, you have volunteered to give a presentation to a class of sophomores on the challenges of achieving creativity in teams. The goal is to motivate them to think creatively as individuals and to help ensure as well that their course teams achieve creativity when assignments call for it. What will you tell them?

Steps to Further Learning 9

Top Choices from *The OB Skills Workbook*

These learning activities from *The OB Skills Workbook* found at the back of the book are suggested for Chapter 9.

Case for Critical Thinking	Team and Experiential Exercises	Self-Assessment Portfolio
• Decisions, Decisions	• Lost at Sea	• Intuitive Ability
	• Entering the Unknown	• Decision-Making Biases
	• Role Analysis Negotiation	
	• The Ugli Orange	
	• Force-Field Analysis	