Herb Kelleher, chairman of Southwest Airlines, made the decision to remove the closets at the front of his firm's planes.[1] He didn't do it to gain more seats. Rather, he did it to improve the speed with which passengers can board and depart. Since all Southwest planes operate with open seating, the first people on the plane typically went to the closets first and then grabbed the nearest seats. Upon landing, departing passengers were held up while the people in the front rows rummaged through the closets for their bags.

As Kelleher put it, the removal of the closets was just one of "1,000 small decisions, all designed to achieve simplicity." Some of the other decisions he made to achieve this goal of simplicity included no meals, no reserved or first-class seats, no computerized reservation systems, no baggage transfers to other airlines, standardized aircraft (they're all Boeing 737s), and reusable boarding passes. Additionally, while other smaller airlines decided to fly to Europe or go head-to-head against their larger competitors, Kelleher has stayed with his niche strategy. "You have to exercise a certain amount of judgment with respect to what you're capable of and what you're not," says Kelleher. He decided early on to attack fewer markets, but with greater intensity. Southwest bombards a city with lots of flights. "We won't go in with just one or two flights. We'll go in with ten or twelve."

Kelleher seems to know what he's doing. Since its birth as a tiny commuter airline in 1971, he has built Southwest into the eighth-largest airline in the United States with revenues of $1.2 billion a year. Customers like Southwest's low fares and on-time schedules. The airline turns around nearly 85 percent of its flights in 15 minutes or less—other major airlines typically spend an hour at the gate—and it is one of the few profitable U.S. airlines. On a typical day, Southwest planes are in the air for 11 hours, versus an industry average of eight hours. And Southwest's cost per available-seat-mile of 6.5¢ blows away such competitors as American and USAir, whose costs are 9¢ and 15¢, respectively.

Herb Kelleher, like all managers, makes a lot of decisions—some small and some large. And the overall quality of these decisions goes a long way in determining their organization's success or failure. In this chapter, we examine the concept of "decision making."

The Decision-Making Process

Decision making is typically described as "choosing among alternatives." But this view is overly simplistic. Why? Because decision making is a *process* rather than the simple act of choosing among alternatives.

decision-making process
A set of eight steps that include identifying a problem, selecting an alternative, and evaluating the decision's effectiveness.

Figure 6–1 illustrates the **decision-making process** as a set of eight steps that begins with identifying a problem, moves to selecting an alternative that can alleviate the problem, and concludes with evaluating the decision's effectiveness. This process is as applicable to your personal decision about where you're going to take your summer vacation as it is to a corporate action such as Hershey Foods' decision to introduce a new candy bar. The process can also be used to describe both individual and group decisions. Let's take a closer look at the process in order to understand what each step encompasses.

Step 1: Identifying a Problem

problem
A discrepancy between an existing and a desired state of affairs.

The decision-making process begins with the existence of a **problem** or, more specifically, a discrepancy between an existing and a desired state of affairs.[2] Let's develop an example that illustrates this point and that we can use throughout this section. For the sake of simplicity, let's make the example something to which most of us can relate: the decision to buy a new car. Take the case of the manager of a manufacturing plant whose company car just blew its engine. Again, for simplicity's sake, assume that it's uneconomic to repair the car and that corporate headquarters requires plant managers to buy new cars rather than to lease them. So now we have a
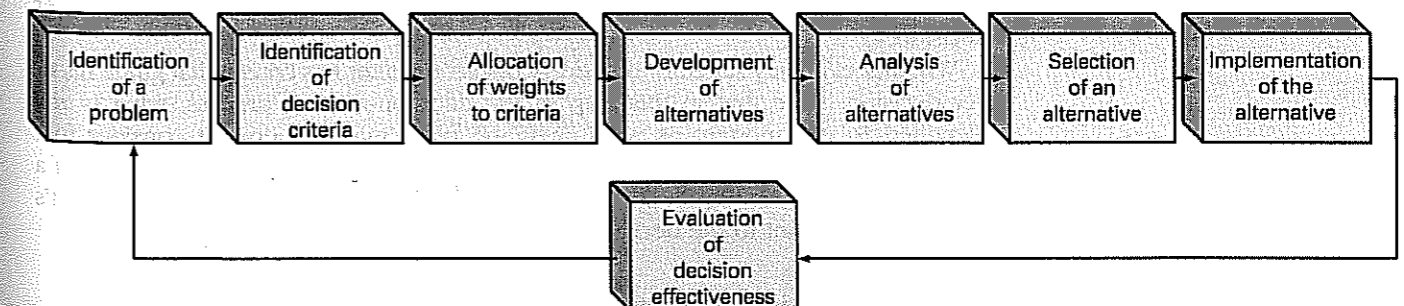

FIGURE 6–1
The Decision-Making Process

problem. There is a disparity between the manager's need to have a car that runs and the fact that her current one doesn't.

Unfortunately, this example doesn't tell us much about how managers identify problems. In the real world, most problems don't come with neon signs identifying them as such. While a blown engine might be a clear signal to the plant manager that she needs a new car, few problems are so obvious. Is a five percent decline in sales a problem? Or are declining sales merely a *symptom* of another problem, such as product obsolescence or an inadequate advertising budget? Also, keep in mind that one manager's "problem" is another manager's "satisfactory state of affairs." Problem identification is subjective. Furthermore, the manager who mistakenly solves the *wrong* problem perfectly is likely to perform just as poorly as the manager who fails to identify the *right* problem and does nothing. Problem identification is neither a simple nor an unimportant part of the decision-making process.[3]

Before something can be characterized as a problem, managers have to be aware of the discrepancy, they have to be under pressure to take action, and they must have the resources necessary to take action.[4]

How do managers become aware that they have a discrepancy? They obviously have to make a comparison between their current state of affairs and some standard. What is that standard? It can be past performance, previously set goals, or the performance of some other unit within the organization or in other organizations. In our car-buying example, the standard is a previously set goal—having a car that runs.

But a discrepancy without pressure becomes a problem that can be put off to some future time. To initiate the decision process, then, the problem must be such that it exerts some type of pressure on the manager to act. Pressure might include organizational policies, deadlines, financial crises, expectations from the boss, or an upcoming performance evaluation.

Finally, managers aren't likely to characterize something as a problem if they perceive that they don't have the authority, money, information, or other resources necessary to act on it. When managers perceive a problem and are under pressure to act, but they feel they have inadequate resources, they usually describe the situation as one in which unrealistic expectations are being placed upon them.

Step 2: Identifying Decision Criteria

decision criteria
Criteria that define what is relevant in a decision.

Once a manager has identified a problem that needs attention, the **decision criteria** that will be important in solving the problem must be identified. That is, managers must determine what is relevant in making a decision.

In our car-buying example, the plant manager has to assess what factors are relevant in her decision. These might include criteria such as price, model (two-door or four-door), size (compact or intermediate), manufacturer (foreign or domestic), optional equipment (automatic transmission, air conditioning, and so on), and repair records. These criteria reflect what the plant manager thinks is relevant in her decision.

Whether explicitly stated or not, every decision maker has criteria that guide his or her decision. Note that in this step in the decision-making process, what is *not* identified is as important as what *is*. If the plant manager doesn't consider fuel economy to be a criterion, then it will not influence her final choice of car. Thus if a decision maker does not identify a particular criterion in this second step, then it's treated as irrelevant to the decision maker.

Step 3: Allocating Weights to the Criteria

The criteria listed in the previous step are not all equally important. It's necessary, therefore, to weight the items listed in Step 2 in order to give them the correct priority in the decision.

TABLE 6-1 Criteria and Weight in Car-Replacement Decision

Criteria	Weight
Initial price	10[a]
Interior comfort	8
Durability	5
Repair record	5
Performance	3
Handling	1

[a] In this example, the highest rating for a criterion is 10 points.

How does the decision maker weigh criteria? A simple approach is merely to give *the* most important criterion a weight of ten and then assign weights to the rest against this standard. Thus, in contrast to a criterion that you gave a five, the highest-rated factor would be twice as important. Of course, you could begin by assigning 100 or 1,000 as the highest weight. Nevertheless, the idea is to use your personal preferences to assign a priority to the relevant criteria in your decision as well as to indicate their degree of importance by assigning a weight to each.

Table 6-1 lists the criteria and weights that our plant manager developed for her car-replacement decision. Price is the most important criterion in her decision, with such factors as performance and handling having low weights.

Step 4: Developing Alternatives

The fourth step requires the decision maker to list the viable alternatives that could succeed in resolving the problem. No attempt is made in this step to appraise these alternatives, only to list them. Let's assume that our plant manager has identified 13 cars as viable choices. They are: Acura Integra RS, Chevrolet Lumina, Eagle Premier LX, Ford Taurus L, Honda Accord LX, Hyundai Sonata GLS, Mazda 626 LX, Nissan Altima, Plymouth Acclaim, Pontiac Bonneville SE, Toyota Camry DLX, Volkswagen Passat, and Volvo 240.

Step 5: Analyzing Alternatives

Once the alternatives have been identified, the decision maker must critically analyze each one. The strengths and weaknesses of each alternative become evident as they are compared with the criteria and weights established in Steps 2 and 3.

Each alternative is evaluated by appraising it against the criteria. Table 6-2 shows the assessed values that the plant manager put on each of her thirteen alternatives after she had test-driven each car.

Keep in mind that the ratings given the thirteen cars shown in Table 6-2 are based on the assessment made by the plant manager. Again, we are using a 1 to 10 scale. Some assessments can be achieved in a relatively objective fashion. For instance, the purchase price represents the best price the manager can get from local dealers, and

TABLE 6-2 Assessment of the 13 Alternatives Against the Decision Criteria

Alternatives	Initial Price	Interior Comfort	Durability	Repair Record	Performance	Handling
Acura Integra RS	5	6	10	10	7	10
Chevrolet Lumina	7	8	5	6	4	7
Eagle Premier LX	5	8	4	5	8	7
Ford Taurus L	6	8	6	7	7	7
Honda Accord LX	5	8	10	10	7	7
Hyundai Sonata GLS	7	7	5	4	7	7
Mazda 626 LX	7	5	7	7	4	7
Nissan Altima	8	5	7	9	7	7
Plymouth Acclaim	10	7	3	3	3	5
Pontiac Bonneville SE	4	10	5	5	10	10
Toyota Camry DLX	6	7	10	10	7	7
Volkswagen Passat	4	7	5	4	10	8
Volvo 240	2	7	10	9	4	5

When you made your decision on what college to attend, you might have considered factors such as location, size of the school, admission requirements, cost, availability of financial assistance, required courses, male-female ratio, prestige, where your best friend was applying, and the like. But these criteria were not all equally important in your final decision. That is, they might all have been relevant, but some were more relevant than others. For instance, some high school seniors consider cost and availability of financial assistance to be the crucial factors in their decision. They might prefer to go to school away from home, but cost considerations are more compelling.

consumer magazines report data from owners on frequency of repairs. But the assessment of handling is clearly a personal judgment. The point is that most decisions contain judgments. They are reflected in the criteria chosen in Step 2, the weights given to the criteria, and the evaluation of alternatives. This explains why two car buyers with the same amount of money may look at two totally different sets of alternatives or even look at the same alternatives and rate them so dissimilarly.

Table 6-2 represents only an assessment of the thirteen alternatives against the decision criteria. It does not reflect the weighting done in Step 3. If one choice had scored 10 on every criterion, you wouldn't need to consider the weights. Similarly, if the weights were all equal, you could evaluate each alternative merely by summing up the appropriate lines in Table 6-2. For instance, the Acura Integra would have a score of 48 and the Ford Taurus a score of 41. If you multiply each alternative assessment against its weight, you get Table 6-3. To illustrate, the Honda Accord scored 50 on durability, which was determined by multiplying the weight given to durability (5) by the manager's appraisal of the Honda on this criterion (10). The

TABLE 6-3 Assessment of Car Alternatives

| Alternatives	Initial Price	Interior Comfort	Durability	Repair Record	Performance	Handling	Totals
Acura Integra RS	50	48	50	50	21	10	229
Chevrolet Lumina	70	64	25	30	12	7	208
Eagle Premier LX	50	64	20	25	24	7	190
Ford Taurus L	60	64	30	35	21	7	217
Honda Accord LX	50	64	50	50	21	7	242
Hyundai Sonata GLS	70	56	25	20	21	7	199
Mazda 626 LX	70	40	35	35	12	7	199
Nissan Altima	80	40	35	35	21	7	218
Plymouth Acclaim	100	56	15	15	9	5	200
Pontiac Bonneville SE	40	80	25	25	30	10	210
Toyota Camry DLX	60	56	50	50	21	7	244
Volkswagen Passat	40	56	25	20	30	8	179
Volvo 240	20	56	50	45	12	5	188

summation of these scores represents an evaluation of each alternative against the previously established criteria and weights. Notice that the weighting of the criteria has significantly changed the ranking of alternatives in our example. The Acura, for instance, has gone from first to third. Both the Acura and the Pontiac Bonneville were first on three of the six criteria, but the Acura didn't do well on interior comfort and the Pontiac didn't score high on durability. And the high initial price for both the Acura and Pontiac worked against them.

Step 6: Selecting an Alternative

The sixth step is the critical act of choosing the best alternative from among those enumerated and assessed. Since we have determined all the pertinent factors in the decision, weighted them appropriately, and identified the viable alternatives, we merely have to choose the alternative that generated the highest score in Step 5. In our car purchase example (Table 6-3), the decision maker would choose the Toyota Camry. On the basis of the criteria identified, the weights given to the criteria, and the decision maker's assessment of each car's achievement on the criteria, the Toyota scored highest (244 points) and thus became the "best" alternative.

Step 7: Implementing the Alternative

While the choice process is completed in the previous step, the decision may still fail if it is not implemented properly. Therefore, Step 7 is concerned with putting the decision into action.

MANAGERS WHO MADE A DIFFERENCE
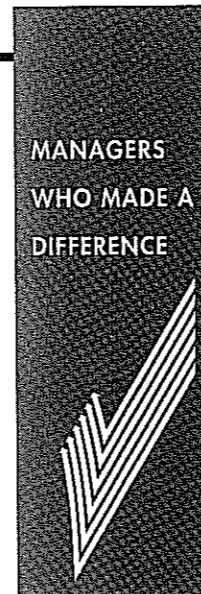
Geneva Overholser at the *Des Moines Register*

Geneva Overholser thinks newspapers have to do a better job of serving women, minorities, and the young.[5] Since leaving the *New York Times* in late 1988 to become editor of the *Des Moines Register,* she has made a series of decisions designed to make those goals reality. She's encouraged her staff to develop stories on battered farm wives, sexual abuse by fathers, child care, sexual harassment, gay Iowans, and rape. But Overholser's most controversial decision was to print Nancy Ziegenmeyer's story of how she was raped and the subsequent battle to have her assailant convicted. What was controversial about this story was that Ziegenmeyer allowed the paper to use her full name and no attempt was made to cover up the personal details in Ziegenmeyer's life.

Overholser has become a national figure largely as a result of urging sex-crime victims to speak out and her arguing that the common newspaper practice of keeping rape victims' names out of print stigmatizes women rather than protecting them: "If I seek a world in which newspapers routinely print rape victims' names, it is also a world in which rape victims are treated compassionately, the stigma eradicated."

Geneva Overholser's decisions have put her newspaper in the headlines. But they have also been recognized as making a difference. In the spring of 1991, she collected a Pulitzer Prize honoring her paper's articles on Nancy Ziegenmeyer.

implementation
Conveying a decision to those affected and getting their commitment to it.

Implementation includes conveying the decision to those affected and getting their commitment to it. As we'll demonstrate later in this chapter, groups or committees can help a manager achieve commitment. If the people who must carry out a decision participate in the process, they are more likely to endorse enthusiastically the outcome. (Parts III through V of this book detail how decisions are implemented by effective planning, organizing, and leading.)

Step 8: Evaluating Decision Effectiveness

The last step in the decision-making process appraises the result of the decision to see whether it has corrected the problem. Did the alternative chosen in Step 6 and implemented in Step 7 accomplish the desired result? The evaluation of such results is detailed in Part VI of this book, where we look at the control function.

What happens if, as a result of this evaluation, the problem is found to still exist? The manager then needs to dissect carefully what went wrong. Was the problem incorrectly defined? Were errors made in the evaluation of the various alternatives? Was the right alternative selected but improperly implemented? Answers to questions like these might send the manager back to one of the earlier steps. It might even require starting the whole decision process anew.

The Pervasiveness of Decision Making

The importance of decision making to every facet of a manager's job cannot be overstated. As Table 6–4 illustrates, decision making permeates all four managerial functions. In fact, this explains why managers—when they plan, organize, lead, and

TABLE 6-4   Examples of Decisions in the Management Functions

Planning

What are the organization's long-term objectives?
What strategies will best achieve these objectives?
What should the organization's short-term objectives be?
How difficult should individual goals be?

Organizing

How many subordinates should I have report directly to me?
How much centralization should there be in the organization?
How should jobs be designed?
When should the organization implement a different structure?

Leading

How do I handle employees who appear to be low in motivation?
What is the most effective leadership style in a given situation?
How will a specific change affect worker productivity?
When is the right time to stimulate conflict?

Controlling

What activities in the organization need to be controlled?
How should these activities be controlled?
When is a performance deviation significant?
What type of management information system should the organization have?

control—are frequently called *decision makers*. So it is not incorrect to say that decision making is synonymous with managing.[6]

The fact that almost everything a manager does involves decision making does not mean that decisions are always long, involved, or clearly evident to an outside observer. Much of a manager's decision-making activity is of a routine nature. Every day of the year you make a decision to deal with the problem of when to eat lunch. It's no big deal. You've made the decision thousands of times before. It offers few problems and can usually be handled quickly. It's the type of decision you almost forget *is* a decision. Managers make dozens of these routine decisions every day. Keep in mind that even though a decision seems easy to make or has been faced by a manager a number of times before, it is a decision nonetheless.

The Rational Decision Maker

rational
Describes choices that are consistent and value-maximizing within specified constraints.

Managerial decision making is assumed to be **rational.** By that we mean that managers make consistent, value-maximizing choices within specified constraints.[7] In this section, we want to take a close look at the underlying assumptions of rationality and then determine how valid these assumptions actually are.

Assumptions of Rationality

A decision maker who was perfectly rational would be fully objective and logical. He or she would define a problem carefully and would have a clear and specific goal. Moreover, the steps in the decision-making process would consistently lead toward selecting the alternative that maximizes that goal. Figure 6–2 summarizes the assumptions of rationality.

Problem clarity. In rational decision making, the problem is clear and unambiguous. The decision maker is assumed to have complete information regarding the decision situation.

Goal orientation. In rational decision making there is no conflict over the goal. Whether the decision involves purchasing a new car, selecting a college to attend, choosing the proper price for a new product, or picking the right applicant to fill a
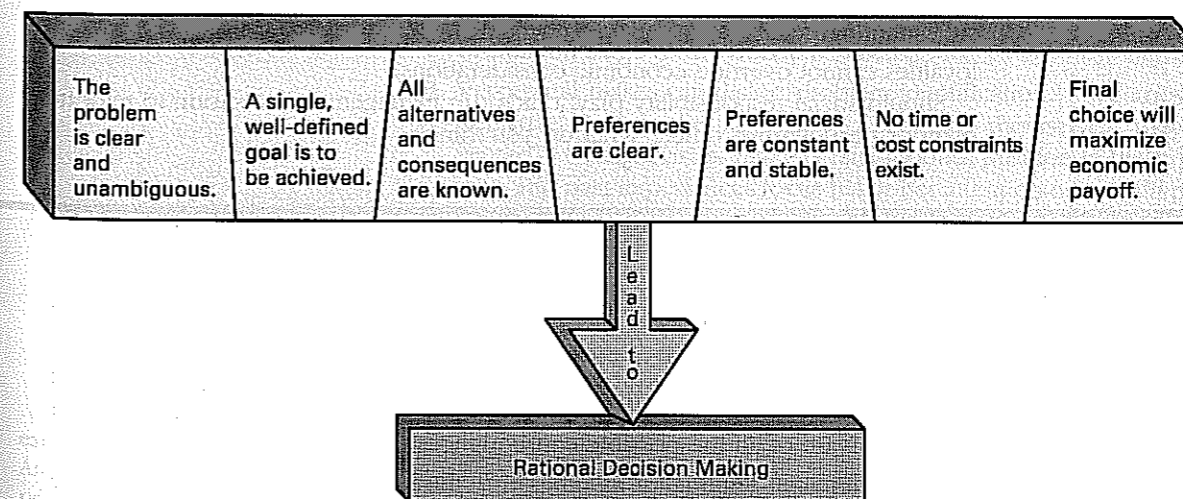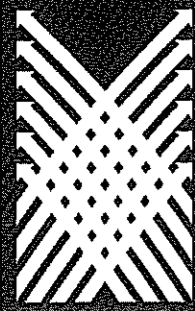

FIGURE 6-2
Assumptions of Rationality

ETHICAL DILEMMAS IN MANAGEMENT

Should Social Responsibility Play a Factor in the Decision to Relocate a Plant or Headquarters' Office?

In 1979, U.S. Steel (now USX Corp.) employed more than 26,000 people in the Monongahela Valley of Western Pennsylvania. After closing three mills, the number of employees is now under 4,000. R.J. Reynolds Tobacco was the dominant employer in Winston-Salem, North Carolina, for much of this century. When the tobacco firm absorbed Nabisco Brands in 1987, the thousands of company headquarters personnel were uprooted from Winston-Salem and moved to Atlanta. In 1989, RJR Nabisco again relocated its corporate headquarters, this time from Atlanta to New York City. In 1992, General Motors announced the closing of its Willow Run plant in Ypsilanti, Michigan, dealing another major blow to a community already suffering from long-term cutbacks in the auto industry.

Relocating plants and corporate headquarters can be devastating to small towns and even to large cities if the organization is a major employer.[8] For instance, Homestead, Pennsylvania, is one of the small towns in the Monongahela Valley that has been permanently altered as a result of USX's 1986 decision to close its mammoth Homestead Works plant, which once employed 15,000 steelworkers. Most of the former USX workers in their mid-40s or older who have found work are underemployed in part-time, low-paying jobs. Mental and physical problems are extremely common in the community. Police and other services have been drastically cut as the tax base has disappeared. Most of the stores in town are now closed and boarded up.

Many communities incur very high expenditures to entice and appease large employers. They build roads, schools, and hospitals for corporations and their personnel. They provide police and fire protection. Other businesses, of course, open up to service the needs of the corporation, its workers, and their families. The decision by management to relocate out of such communities—as experienced by places like Ypsilanti, Homestead, and Winston-Salem—can cause economic collapse in towns and whole regions.

Management can respond by arguing that it brought more to the relationship than the community gave back—specifically, high-paying jobs that allowed the community to grow and prosper—and that, in today's global economy, hometown loyalties cannot override economic considerations.

Should social responsibility play a factor in management's decision to relocate a plant or headquarters office? What do *you* think?

job vacancy, the decision maker has a single, well-defined goal that he or she is trying to reach.

Known options. It is assumed that the decision maker is creative, can identify all the relevant criteria, and can list all the viable alternatives. Further, the decision maker is aware of all the possible consequences of each alternative.

Clear preferences. Rationality assumes that the criteria and alternatives can be ranked according to their importance.

Constant preferences. In addition to a clear goal and preferences, it is assumed that

the specific decision criteria are constant and that the weights assigned to them are stable over time.

No time or cost constraints. The rational decision maker can obtain full information about criteria and alternatives because it is assumed that there are no time or cost constraints.

Maximum payoff. The rational decision maker always chooses the alternative that will yield the maximum economic payoff.

These assumptions of rationality apply to any decision. However, since we're concerned with managerial decision making in an organization, we need to add one further assumption. Rational managerial decision making assumes that decisions are made in the economic best interests of the organization. That is, the decision maker is assumed to be maximizing the *organization's* interests, not his or her own interests.

Limits to Rationality

Managerial decision making *can* follow rational assumptions. If a manager is faced with a simple problem in which the goals are clear and the alternatives few, in which the time pressures are minimal and the cost of seeking out and evaluating alternatives is low, for which the organizational culture supports innovation and risk taking, and in which the outcomes are relatively concrete and measurable, the decision process is likely to follow the assumptions of rationality.[9] But most decisions that managers face don't meet all these tests.

Hundreds of studies have sought to improve our understanding of managerial decision making.[10] Individually, these studies often challenge one or more of the assumptions of rationality. Taken together, they suggest that decision making often veers from the logical, consistent, and systematic process that rationality implies. Let us examine some important insights that researchers have uncovered about the decision-making process:

1. There are limits to an individual's information-processing capacity.[11] Most people are able to hold only about seven pieces of information in short-term memory. When decisions become complex, individuals tend to create simple models that allow them to reduce the problem to understandable dimensions.

2. Decision makers tend to intermix solutions with problems.[12] The definition of a problem often includes a rough description of an acceptable solution. This clouds the objectivity of both the alternative-generation stage and the alternative-evaluation stage of the decision process.

3. Perceptual biases can distort problem identification.[13] We know that "except in detective stories, the facts don't speak for themselves; they must be interpreted."[14] The decision maker's background, position in the organization, interests, and past experiences focus his or her attention on certain problems and not others. The organization's culture can also distort a manager's perceptions: "Managers sometimes don't see what they believe can't be there."[15]

4. Many decision makers select information more for its accessibility than for its quality.[16] Important information, therefore, may carry less weight in a decision than information that is easy to get.

5. Decision makers tend to commit themselves prematurely to a specific alternative early in the decision process, thus biasing the process toward choosing that alternative.[17]

6. Evidence that a previous solution is not working does not always generate a search for new alternatives. Instead, it frequently initiates an **escalation of commitment** whereby the decision maker further increases the commitment of

escalation of commitment
An increased commitment to a previous decision despite evidence that it may have been wrong.

One of the most frequently cited examples of escalation of commitment is President Lyndon Johnson's decision regarding the Vietnam War. Despite continued information that bombing North Vietnam was not bringing the war any closer to conclusion, his solution was to increase the tonnage of bombs dropped.

resources to the previous course of action in an effort to demonstrate that the initial decision was not wrong.[18]

7. Prior decision precedents constrain current choices.[19] Decisions are rarely simple, discrete events. They are more aptly described as points in a stream of choices. Most decisions are really an accumulation of subdecisions made over long periods of time.

8. Organizations are made up of divergent interests that make it difficult, even impossible, to create a common effort toward a single goal. Decisions are therefore rarely directed toward achieving an overall organizational goal. Instead, there is a constant bargaining among managers, who perceive problems differently and prefer different alternatives.[20] The existence of divergent interests ensures that there will be differences in goals, alternatives, and consequences. Bargaining is needed to achieve compromise and support for implementing the final solution. Consequently, "where you stand depends on where you sit."[21] In ambiguous and contradictory situations, decisions are largely the outcome of power and political influences.[22]

9. Organizations place time and cost constraints on decision makers, which, in turn, limit the amount of search that a manager can undertake.[23] Thus, new alternatives tend to be sought in the neighborhood of old ones.[24]

10. In spite of the potential for diversity, a strong conservative bias exists in most organizational cultures.[25] Most organizational cultures reinforce the status quo, which discourages risk taking and innovation. In such cultures, employees are frequently rewarded for being "team players" and for not "making waves," and wrong choices have more of an impact on a decision maker's career than does the development of new ideas. So decision makers spend more effort trying to avoid mistakes than in developing innovative ideas.

Bounded Rationality

Do these limits to rationality mean that managers ignore the eight-step decision process we described at the beginning of this chapter? Not necessarily. Why? Because in spite of the limits to perfect rationality, managers are expected to appear to follow the rational process.[26] Managers know that "good" decision makers are *supposed* to do certain things: identify problems, consider alternatives, gather information, and act decisively but prudently. Managers can thus be expected to exhibit the correct decision-making behaviors. By doing so, managers signal to their superiors, peers, and subordinates that they are competent and that their decisions are the result of intelligent and rational deliberation.

Table 6–5 summarizes how the perfectly rational manager should proceed through the eight-step decision process. It also describes an alternative model—one followed by a manager operating under assumptions of **bounded rationality.**[27] In bounded rationality, managers construct simplified models that extract the essential features from problems without capturing all their complexity. Then, given information processing limitations and constraints imposed by the organization, managers attempt to behave rationally within the parameters of the simple model. The result is a **satisficing** decision rather than a maximizing one; that is, a decision in which the solution is "good enough."

The implications of bounded rationality on the manager's job cannot be overlooked. In situations in which the assumptions of perfect rationality do not apply (including many of the most important and far-reaching decisions that a manager makes), the details of the decision-making process are strongly influenced by the

bounded rationality
Behavior that is rational within the parameters of a simplified model that captures the essential features of a problem.

satisficing
Acceptance of solutions that are "good enough."

TABLE 6–5 Two Views of the Decision-Making Process

Decision-Making Step	Perfect Rationality	Bounded Rationality
1. Problem formulation	An important and relevant organizational problem is identified.	A visible problem that reflects the manager's interests and background is identified.
2. Identification of decision criteria	All criteria are identified.	A limited set of criteria are identified.
3. Allocation of weights to criteria	All criteria are evaluated and rated in terms of their importance to the organization's goal.	A simple model is constructed to evaluate and rate the criteria; the decision maker's self-interest strongly influences the ratings.
4. Development of alternatives	A comprehensive list of all alternatives is developed creatively.	A limited set of similar alternatives is identified.
5. Analysis of alternatives	All alternatives are assessed against the decision criteria and weights; the consequences for each alternative are known.	Beginning with a favored solution, alternatives are assessed, one at a time, against the decision criteria.
6. Selection of an alternative	*Maximizing decision:* the one with the highest economic outcome (in terms of the organization's goal) is chosen.	*Satisficing decision:* the search continues until a solution is found that is satisfactory and sufficient, at which time the search stops.
7. Implementation of alternative	Since the decision maximizes the single, well-defined goal, all organizational members will embrace the solution.	Politics and power considerations will influence the acceptance of, and commitment to, the decision.
8. Evaluation	The decision's outcome is objectively evaluated against the original problem.	Measurement of the decision's results are rarely so objective as to eliminate self-interests of the evaluator; possible escalation of resources to prior commitments in spite of both previous failures and strong evidence that allocation of additional resources is not warranted.

decision maker's self-interest, the organization's culture, internal politics, and power considerations. As you'll see in future chapters, the disparity between the perfectly rational view of how managers *should* make decisions and the bounded rationality description of how managers *actually* make them often explains the instances when management practice deviates from management theory.

THE CHANGING FACE OF MANAGEMENT PRACTICE

The Growing Popularity of Intuitive Decision Making

A professor of quantitative methods once commented to me, "Decision making is easy. Just identify the appropriate model, specify the variables, plug in the numbers, and crank out the answer." This approach to managerial decision making reached its peak in the mid-1980s, when the focus of almost every major M.B.A. program had become teaching students quantitative decision models. The guiding principle that seemed to drive this approach was "if you can't quantify it, it doesn't exist!"

The flaws in this rational decision approach were far from minuscule. Quaker Oats, for instance, used state-of-the-art rational decision-making models in its effort to gain an upper hand in the pet food market.[28] However, Quaker's models didn't factor in the harsh, almost irrational way that competitors would throw amounts of money at low-profit markets. The result contributed to a sharp drop in Quaker Oats' earnings in the early 1990s.

The essence of the rational model is to replace intuition with systematic logic. But, as a result of experiences like that of Quaker Oats, intuitive decision making is gaining new followers in both business schools and executive suites. Experts no longer automatically assume that the use of intuition is an irrational or ineffective means for making decisions.[29] There is growing recognition that rational analysis can be over-emphasized and that, in certain instances, decision making can be improved by relying on the decision maker's intuition. So intuition doesn't replace rational analysis—rather, the two work to complement each other.

When are managers most likely to use intuitive decision making? Eight conditions have been identified: (1) When a high level of uncertainty exists; (2) when little previous precedent exists; (3) when variables are less scientifically predictable; (4) when "facts" are limited; (5) when facts don't clearly point the way to go; (6) when analytical data are of little use; (7) when several plausible alternative solutions exist to choose from, with good arguments for each; and (8) when time is limited and there is pressure to come up with the right decision.[30]

Is there a standard model that managers follow when using intuition? They seem to follow one of two approaches. They apply intuition to either the front or the back end of the decision-making process.[31]

When intuition is used at the front end, the decision maker tries to avoid analyzing the problem systematically. He or she gives intuition a free rein, trying to generate unusual possibilities and new options that might not normally emerge from an analysis of past data or traditional ways of doing things. A back end approach to using intuition relies on rational analysis in identifying and allocating weights to decision criteria, as well as in developing and evaluating alternatives. But after this is done, the decision maker stops the process in order to sift through and digest the information. This is best characterized by the action of "sleeping on the decision" for a day or two before making the final choice.

Problems and Decisions: A Contingency Approach

The *type* of problem a manager faces in a decision-making situation often determines how that problem is treated. In this section we present a categorization scheme for problems and for types of decisions. Then we show how the type of decision a manager uses should reflect the characteristics of the problem.

Types of Problems

Some problems are straightforward. The goal of the decision maker is clear, the problem familiar, and information about the problem easily defined and complete. Examples might include a customer wanting to return a purchase to a retail store, a supplier being late with an important delivery, a newspaper having to respond to an unexpected and fast-breaking news event, or a college's handling of a student who seeks to drop a class. Such situations are called **well-structured problems.** They align closely with the assumptions underlying perfect rationality.

Many situations faced by managers, however, are **ill-structured problems.** They are new or unusual. Information about such problems is ambiguous or incomplete. The selection of an architect to design a new corporate headquarters building is one example. So too is the decision to invest in a new, unproven technology.

Types of Decisions

Just as problems can be divided into two categories, so too can decisions. As we will see, *programmed,* or routine, decision making is the most efficient way to handle well-structured problems. However, when problems are ill-structured, managers must rely on *nonprogrammed* decision making in order to develop unique solutions.

Programmed decisions A waitress in a restaurant spills a drink on a customer's coat. The restaurant manager has an upset customer. What does the manager do? Since such occurrences are not infrequent, there is probably some standardized routine for handling the problem. For example, if it is the waitress's fault, if the damage is significant, and if the customer has asked for a remedy, the manager offers to have the coat cleaned at the restaurant's expense. This is a **programmed decision.**

Decisions are programmed to the extent that they are repetitive and routine and to the extent that a definite approach has been worked out for handling them. Because the problem is well-structured, the manager does not have to go to the trouble and expense of working up an involved decision process. Programmed decision making is relatively simple and tends to rely heavily on previous solutions. The "develop-the-alternatives" stage in the decision-making process is either nonexistent or given little attention. Why? Because once the structured problem is defined, its solution is usually self-evident or at least reduced to very few alternatives that are familiar and that have proven successful in the past. In many cases, programmed decision making becomes decision making by precedent. Managers simply do what they and others have done in the same situation. The spilled drink on the customer's coat does not require the restaurant manager to identify and weigh decision criteria nor develop a long list of possible solutions. Rather, the manager falls back on a systematic procedure, rule, or policy.

A **procedure** is a series of interrelated sequential steps that a manager can use for responding to a structured problem. The only real difficulty is in identifying the problem. Once the problem is clear, so is the procedure. For instance, a purchasing manager receives a request from accounting for five desktop printing calculators that

well-structured problems
Straightforward, familiar, easily defined problems.

ill-structured problems
New problems in which information is ambiguous or incomplete.

programmed decision
A repetitive decision that can be handled by a routine approach.

procedure
A series of interrelated sequential steps that can be used to respond to a structured problem.

can perform a certain set of functions. The purchasing manager knows that there is a definite procedure for handling this decision. Has the requisition been properly filled out and approved? If not, send the requisition back with a note explaining what is deficient. If the request is complete, the approximate costs are estimated. If the total exceeds $5,000, three bids must be obtained. If the total is $5,000 or less, only one vendor need be identified and the order placed. The decision-making process in this case is merely the executing of a simple series of sequential steps.

A **rule** is an explicit statement that tells a manager what he or she ought or ought not to do. Rules are frequently used by managers when they confront a well-structured problem because they are simple to follow and ensure consistency. In the illustration above, the $5,000 cutoff rule simplifies the purchasing manager's decision about when to use multiple bids. Similarly, rules about lateness and absenteeism permit supervisors to make discipline decisions rapidly and with a relatively high degree of fairness.

A third guide for making programmed decisions is a **policy.** It provides guidelines to channel a manager's thinking in a specific direction. In contrast to a rule, a policy establishes parameters for the decision maker rather than specifically stating what should or should not be done. As an analogy, think of the Ten Commandments as rules, and the U.S. Constitution as policy. The latter requires judgment and interpretation; the former do not.

Policies typically contain an ambiguous term that leaves interpretation to the decision maker. For instance, each of the following is a policy statement: "The customer shall always be *satisfied*." "We promote from within, *whenever possible.*" "Employee wages shall be *competitive* for the community in which our plants are located." Notice that *satisfied, whenever possible,* and *competitive* are terms that require interpretation. The policy to pay competitive wages does not tell a given plant's personnel manager what he or she should pay, but it does give direction to the decision he or she will make. If other firms in the community are paying between $6.70 and $8.50 an hour for unskilled labor, the decision to set hourly rates at $6.40 or $9.00 clearly would not be within the guidelines set by company policy.

Nonprogrammed Decisions   Deciding whether or not to merge with another organization, how to restructure an organization to improve efficiency, or whether to close a money-losing division are examples of **nonprogrammed decisions.** Such decisions are unique and nonrecurring. When a manager confronts an ill-structured problem, or one that is novel, there is no cut-and-dried solution. It requires a custom-made response.

The creation of a marketing strategy for a new product represents an example of a nonprogrammed decision. It will be different from previous marketing decisions because the product is new, a different set of competitors exists, and other conditions that may have existed when previous products were introduced years earlier have changed. IBM's introduction of a personal computer in the early 1980s was unlike any other marketing decision the company had previously made. Certainly, IBM had a wealth of experience selling computers. It also had previously sold to small businesses and general consumers through its typewriter division. But it had no substantive experience in mass-marketing relatively low-cost personal computers. It faced such aggressive competitors as Apple, Hewlett-Packard, and Digital Equipment. The needs and sophistication of personal computer customers differed from those of buyers who purchased multimillion-dollar systems for their corporate headquarters. The hundreds of decisions that went into IBM's marketing strategy for personal computers had never been made before and thus were clearly of the nonprogrammed variety.

rule
An explicit statement that tells managers what they ought or ought not to do.

policy
A guide that establishes parameters for making decisions.

nonprogrammed decisions
Unique decisions that require a custom-made solution.

FIGURE 6-3
Types of Problems, Types of Decisions, and Level in the Organization
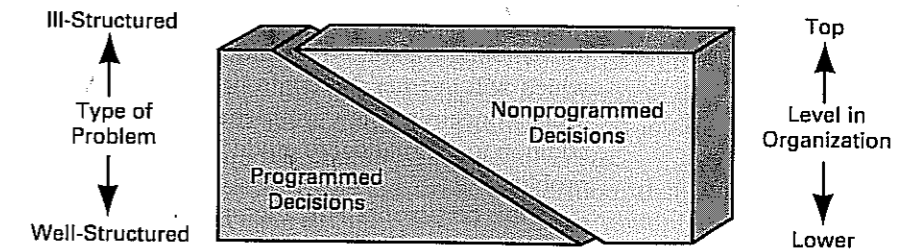
Integration

Figure 6-3 describes the relationship between the types of problems, the types of decisions, and level in the organization. Well-structured problems are responded to with programmed decision making. Ill-structured problems require nonprogrammed decision making. Lower-level managers essentially confront familiar and repetitive problems; therefore, they most typically rely on programmed decisions such as standard operating procedures. However, the problems confronting managers are more likely to become ill-structured as the managers move up the organizational hierarchy. Why? Because lower-level managers handle the routine decisions themselves and pass upward only decisions that they find unique or difficult. Similarly, managers pass down routine decisions to their subordinates in order to spend their time on more problematic issues.

Few managerial decisions in the real world are either fully programmed or nonprogrammed. These are extremes, and most decisions fall somewhere in between. Few programmed decisions are designed to eliminate individual judgment completely. At the other extreme, even the most unique situation requiring a nonprogrammed decision can be helped by programmed routines. It is best to think of decisions as *mainly* programmed or *mainly* nonprogrammed, rather than as fully one or the other.

A last point on this topic is that organizational efficiency is facilitated by the use of programmed decision making, which may explain its wide popularity. Wherever possible, management decisions are likely to be programmed. Obviously, this is not too realistic at the top of the organization, since most of the problems that top management confronts are of a nonrecurring nature. But there are strong economic incentives for top management to create standard operating procedures (SOPs), rules, and policies to guide other managers.

Programmed decisions minimize the need for managers to exercise discretion. This is relevant because discretion costs money. The more nonprogrammed decision making a manager is required to do, the greater the judgment needed. Since sound judgment is an uncommon quality, it costs more to acquire the services of managers who possess this ability.

Consider the following: One multibillion-dollar corporation has controllers (chief accounting managers) at each of its more than three dozen plants throughout the United States. The controllers typically have three to six supervisors reporting to them and are responsible for staffs of twenty-five to fifty. How much do you think those controllers earn? Would it surprise you to learn that, in 1994, most were earning within a thousand dollars of $38,000 a year? This seems extremely low compensation for such responsibilities, but the company has succeeded in making almost all of the controller's decisions highly programmed. Most of the controllers have only a high school education. They are not exceedingly talented. However, they can follow directions. The company has produced a 4,000-page accounting manual, which is continually updated. The manual tells each controller specifically how almost any

problem he or she encounters should be handled. If the problem and the procedure for handling it cannot be found, the controller is instructed to call the head office, which will instruct the controller in what to do. Not surprisingly, calls to the head office concerning new problems are typically followed a month or so later by an addition to the manual to guide other plant controllers who might confront this same problem.

In this corporation, the high-priced talent makes all the nonprogrammed accounting decisions at the head office. When these problems become recurring ones, they write up SOPs and distribute them to all plant controllers. In this way, the company is able to get consistent and competent decision making without having to hire experienced individuals with a college education, possibly a master's degree, and a C.P.A. certificate, who would command annual salaries of $65,000 or more.

It should be mentioned that other areas in this company—purchasing, personnel, quality control—also have plant manuals that are regularly updated by their respective staffs at the head office.

Of course, some organizations try to economize by hiring less-skilled managers without developing programmed decision guides for them to follow. Take, for example, a small women's clothing store chain whose owner, because he chooses to pay low salaries, hires store managers with little experience and limited ability to make good judgments. This, in itself, needn't be a problem. The trouble is that the owner provides neither training nor explicit rules and procedures to guide the decisions of his store managers. The result has been continuous complaints by customers about things like promotional discounts, processing credit sales, and the handling of returns.

Analyzing Decision Alternatives

One of the more challenging tasks facing a manager is analyzing decision alternatives (Step 5 in the decision-making process). This section discusses approaches for analyzing alternatives under three different conditions: certainty, risk, and uncertainty.

Certainty

certainty
A situation in which a manager can make accurate decisions because the outcome of every alternative is known.

The ideal situation for making decisions is one of **certainty;** that is, the manager is able to make perfectly accurate decisions because the outcome from every alternative is known. As you might expect, this is *not* the situation in which most decisions are made. It is more idealistic than pragmatic.

Risk

risk
Those conditions in which the decision maker is able to estimate the likelihood of certain outcomes.

A far more relevant situation is one of **risk.** By risk, we mean those conditions in which the decision maker is able to estimate the likelihood of certain alternatives or outcomes. This ability to assign probabilities to outcomes may be the result of personal experience or secondary information. However, under the conditions of risk, the manager has historical data that allow him or her to assign probabilities to different alternatives. Let's look at an example.

Suppose that you manage a ski resort in the Colorado Rockies. You are contemplating whether to add another lift to your current facility. Obviously, your decision will be significantly influenced by the amount of additional revenue that the new lift would generate, and this will depend on the level of snowfall. The decision is made somewhat clearer when you are reminded that you have reasonably reliable past data

on snowfall levels in your area. The data indicate that during the past ten years, you received three years of heavy snowfall, five years of normal snow, and two years of light snow. Can you use this information to determine the expected future annual revenue if the new lift is added? If you have good information on the amount of revenues for each level of snow, the answer is yes.

You can create an expected value formulation; that is, you can compute the conditional return from each possible outcome by multiplying expected revenues by probabilities. The result is the average revenue that can be expected over time if the given probabilities hold. As Table 6–6 shows, the expected revenue from adding a new ski lift is $687,500. Of course, whether that justifies a positive or negative decision would depend on the costs involved in generating this revenue—factors such as the cost of erecting the lift, the additional annual expenses for another lift, the interest rate for borrowing money, and so forth.

Uncertainty

uncertainty
A situation in which a decision maker has neither certainty nor reasonable probability estimates available.

What happens if we have to make a decision when neither certainty nor reasonable probability estimates are available? We call such a condition **uncertainty,** and choice will be influenced by the psychological orientation of the decision maker. The optimistic manager will follow a *maximax* choice (maximizing of the maximum possible payoff), the pessimist will pursue a *maximin* choice (maximizing the minimum possible payoff), while the manager who desires to minimize his maximum "regret" will opt for a *minimax* choice.

Consider the case of the marketing manager at Citibank in New York. He has determined four possible strategies for promoting Citibank's MasterCard throughout the Northeast. But the marketing manager is also aware that his major competitor, Chase Manhattan, has three competitive actions of its own for promoting its Visa card in the same region. In this case, we will assume that the Citibank executive has no previous knowledge that would allow him to place probabilities on the success of any of his four strategies. With these facts, the Citibank manager has formulated the matrix in Table 6–7 to show the various Citibank strategies and the resulting profit to Citibank depending on the competitive action chosen by Chase Manhattan.

In this example, if our Citibank manager is an optimist he will choose S_4, because that could produce the largest possible gain: $28 million. Note that this choice maximizes the maximum possible gain.

If our manager is a pessimist, though, he will assume that only the worst can occur. The worst outcome for each strategy is as follows: $S_1 = 11$; $S_2 = 9$; $S_3 = 15$; $S_4 = 14$. These are the most pessimistic outcomes from each strategy. Following the maximin choice, he would maximize the minimum payoff; that is, he would select S_3.

In the third approach, managers recognize that once a decision is made it will not necessarily result in the most profitable payoff. This suggests that there may be a

TABLE 6–6 Expected Value for Revenues from the Addition of One Ski Lift

Event	Expected Revenues	× Probability	=	Expected Value of Each Alternative
Heavy snowfall	$850,000	0.3		$255,000
Normal snowfall	725,000	0.5		362,500
Light snowfall	350,000	0.2		70,000
				$687,500

TABLE 6-7 Payoff Matrix (in millions of dollars)

Citibank Marketing Strategies	Chase Manhattan's Response		
	CA_1	CA_2	CA_3
S_1	13	14	11
S_2	9	15	18
S_3	24	21	15
S_4	18	14	28

TABLE 6-8 Regret Matrix (in millions of dollars)

Citibank Marketing Strategies	Chase Manhattan's Response		
	CA_1	CA_2	CA_3
S_1	11	7	17
S_2	15	6	10
S_3	0	0	13
S_4	6	7	0

regret of profits forgone, regret referring to the amount of money that *could* have been made had a different strategy been used. Managers calculate regret by subtracting all possible payoffs in each category from the maximum possible payoff for each given event, in this case for each competitive action. For our Citibank manager, the highest payoff, given that Chase engages in CA_1, CA_2, CA_3, is $24 million, $21 million, and $28 million, respectively (the highest number in each column). Subtracting the payoffs in Table 6–7 from these figures produces the results shown in Table 6–8.

The maximum regrets are: $S_1 = 17$; $S_2 = 15$; $S_3 = 13$; and $S_4 = 7$. Since the minimax choice minimizes the maximum regret, our Citibank manager would choose S_4. By making this choice, he will never have a regret of profits forgone of more than $7 million. This contrasts, for example, with a regret of $15 million had he chosen S_2 and Chase Manhattan taken CA_1.

Group Decision Making

Many decisions in organizations, especially important decisions that have a far-reaching impact on organizational activities and personnel, are made in groups. It's a rare organization that doesn't at some time use committees, task forces, review panels, study teams, or similar groups as vehicles for making decisions. Studies tell us that managers spend up to 40 percent or more of their time in meetings.[32] Undoubtedly, a large portion of that time is involved with formulating problems, arriving at solutions to those problems, and determining the means for implementing the solutions. It's possible, in fact, for groups to be assigned any of the eight steps in the decision-making process.

In this section, we'll look at the advantages and disadvantages of both group and individual decision making, identify when groups should be preferred, and review the more popular techniques for improving group decision making.

Managers at Compaq Computer rely on groups as their central decision making approach.

Advantages and Disadvantages

Individual and group decisions each have their own set of strengths. Neither is ideal for all situations. Let's begin by reviewing the *advantages* that group decisions have over individual decisions.

1. *Provides more complete information.* There is often truth to the axiom that two heads are better than one. A group will bring a diversity of experience and perspectives to the decision process that an individual, acting alone, cannot.

2. *Generates more alternatives.* Because groups have a greater quantity and diversity of information, they can identify more alternatives than can an individual. This is most evident when group members represent different specialties. For instance, a group made up of representatives from engineering, accounting, production, marketing, and personnel will generate alternatives that reflect their diverse backgrounds. Such a multiplicity of "world views" often yields a greater array of alternatives.

3. *Increases acceptance of a solution.* Many decisions fail after the final choice has been made because people do not accept the solution. However, if the people who will be affected by a certain solution and who will help implement it get to participate in the decision making itself, they will be more likely to accept the decision and to encourage others to accept it. Group members are reluctant to fight or undermine a decision they have helped develop.

4. *Increases legitimacy.* The group decision-making process is consistent with democratic ideals and therefore decisions made by groups may be perceived as more legitimate than decisions made by a single person. The fact that the individual decision maker has complete power and has not consulted others can create a perception that a decision was made autocratically and arbitrarily.

If groups are so good, how did the phrase "A camel is a racehorse put together by a committee" become so popular? The answer, of course, is that group decisions are not without their drawbacks. The major *disadvantages* of group decision making are as follows.

1. *Time consuming.* It takes time to assemble a group. Additionally, the interaction that takes place once the group is in place is frequently inefficient. The result is

that groups almost always take more time to reach a solution than it would take an individual making the decision alone.

2. *Minority domination.* Members of a group are never perfectly equal. They may differ in rank in the organization, experience, knowledge about the problem, influence with other members, verbal skills, assertiveness, and the like. This creates the opportunity for one or more members to use their advantages to dominate others in the group. A minority that dominates a group frequently has an undue influence on the final decision.

3. *Pressures to conform.* There are social pressures to conform in groups. They can lead to what has been called **groupthink.**[33] This is a form of conformity in which group members withhold deviant, minority, or unpopular views in order to give the appearance of agreement. Groupthink undermines critical thinking in the group and eventually harms the quality of the final decision.

groupthink
The withholding by group members of different views in order to appear in agreement.

4. *Ambiguous responsibility.* Group members share responsibility, but who is actually responsible for the final outcome? In an individual decision, it is clear who is responsible. In a group decision, the responsibility of any single member is watered down.

Effectiveness and Efficiency

Whether groups are more effective than individuals depends on the criteria you use for defining effectiveness. Group decisions tend to be more *accurate.* The evidence indicates that, on the average, groups make better decisions than individuals.[34] This doesn't mean, of course, that *all* groups outperform *every* individual. Rather, group decisions have been found to be better than those that would have been reached by the average individual in the group. However, they are seldom better than the performance of the best individual.

If decision effectiveness is defined in terms of *speed,* individuals are superior. Group decision processes are characterized by give and take, which consumes time.

Effectiveness may mean the degree to which a solution demonstrates *creativity.* If creativity is important, groups tend to be more effective than individuals.[35] This requires, however, that the forces that foster groupthink be constrained. In the next section, we'll review several remedies for the groupthink ailment.

The final criterion for effectiveness is the degree of *acceptance* that the final decision achieves. As was previously noted, because group decisions have input from more people, they are likely to result in solutions that will be more widely accepted.

The effectiveness of group decision making is also influenced by the size of the group. The larger the group, the greater the opportunity for heterogeneous representation. On the other hand, a larger group requires more coordination and more time to allow all members to contribute. What this means is that groups probably should not be too large: a minimum of five to a maximum of about 15. Evidence indicates, in fact, that groups of five and, to a lesser extent, seven are the most effective.[36] Because five and seven are odd numbers, strict deadlocks are avoided. These groups are large enough for members to shift roles and withdraw from embarrassing positions but still small enough for quieter members to participate actively in discussions.

Effectiveness should not be considered without also assessing efficiency. Groups almost always stack up a poor second in efficiency to the individual decision maker. With few exceptions, group decision making consumes more work hours than does individual decision making. Exceptions occur when, to achieve comparable quantities of diverse input, the individual decision maker must spend a great deal of time reviewing files and talking to people. Because groups can include members from diverse areas, they can spend less time searching for information. However, as we noted, such decisions tend to be the exception. Generally, groups are less efficient

MANAGING FROM A GLOBAL PERSPECTIVE

The Effect of National Culture on Decision-Making Styles

The way decisions are made—whether by group, participatively, or autocratically by an individual manager—and the degree of risk a decision maker is willing to take are just two examples of decision variables that reflect a country's cultural environment. Decision making in Japan, for instance, is much more group-oriented than in the United States, and characteristics of the Japanese national culture can explain why.[37]

The Japanese value conformity and cooperation. One can see this in their schools as well as in their business organizations. Before making decisions, Japanese CEOs collect a large amount of information, which is then used in consensus-forming group decisions. Since employees in Japanese organizations have high job security, managerial decisions take a long-term perspective rather than focusing on short-term profits, as is often the practice in the United States.

Senior managers in other nations—including France, Germany, and Sweden—also adapt their decision styles to their country's culture. In France, for instance, autocratic decision making is widely practiced, and managers avoid risks. Managerial styles in Germany reflect the German culture's concern for structure and order. There are extensive rules and regulations in German organizations. Managers have well-defined responsibilities and accept that decisions must go through channels. Decision styles of Swedish managers differ considerably from those of their French and German counterparts. Managers in Sweden are more aggressive; they take the initiative with problems and are not afraid to take risks. Senior managers in Sweden also push decisions down in the ranks. They encourage lower-level managers and employees to take part in decisions that affect them.

These examples are meant to remind you that managers need to modify their decision styles to reflect the national culture of the country in which they live as well as to reflect the organizational culture of the firm in which they work.

than individuals. In deciding whether to use groups, then, primary consideration must be given to assessing whether increases in effectiveness are more than enough to offset the losses in efficiency.

Techniques for Improving Group Decision Making

When members of a group meet face-to-face and interact with one another, they create the potential for groupthink. They can censor themselves and pressure other group members into agreement. Four ways of making group decision making more creative have been suggested: brainstorming, the nominal group and Delphi techniques, and electronic meetings.

Brainstorming   **Brainstorming** is a relatively simple technique for overcoming pressures for conformity that retard the development of creative alternatives.[38] It does this by utilizing an idea-generating process that specifically encourages any and all alternatives while withholding any criticism of those alternatives.

brainstorming
An idea-generating process that encourages alternatives while withholding criticism.

In a typical brainstorming session, a half-dozen to a dozen people sit around a table. The group leader states the problem in a clear manner that is understood by all participants. Members then "free-wheel" as many alternatives as they can in a given

time. No criticism is allowed, and all the alternatives are recorded for later discussion and analysis.

Brainstorming, however, is merely a process for generating ideas. The next two techniques go further by offering ways to arrive at a preferred solution.[39]

nominal group technique
A decision-making technique in which group members are physically present but operate independently.

Nominal Group Technique   The nominal group restricts discussion during the decision-making process, hence the term **nominal group technique.** Group members must be present, as in a traditional committee meeting, but they are required to operate independently. Specifically, the following steps take place:

1. Members meet as a group; but before any discussion takes place, each member independently writes down his or her ideas on the problem.

2. This silent period is followed by each member presenting one idea to the group. Each member takes his or her turn, going around the table, presenting one idea at a time until all ideas have been presented and recorded (typically on a flip chart or chalkboard). No discussion takes place until all ideas have been recorded.

3. The group now discusses the ideas for clarity and evaluates them.

4. Each group member silently and independently assigns a rank to the ideas. The final decision is determined by the idea with the highest aggregate ranking.

The chief advantage of this technique is that it permits the group to meet formally but does not restrict independent thinking as so often happens in the traditional interacting group.

Delphi technique
A group decision-making technique in which members never meet face to face.

Delphi Technique   A more complex and time-consuming alternative is the **Delphi technique,** which is similar to the nominal group technique except that it does not require the physical presence of the group members. This is because the Delphi technique never allows the group members to meet face to face. The following steps characterize the Delphi technique:

1. The problem is identified, and members are asked to provide potential solutions through a series of carefully designed questionnaires.

2. Each member anonymously and independently completes the first questionnaire.

3. Results of the first questionnaire are compiled at a central location, transcribed, and reproduced.

4. Each member receives a copy of the results.

5. After viewing the results, members are again asked for their solutions. The results typically trigger new solutions or cause changes in the original position.

6. Steps 4 and 5 are repeated as often as necessary until consensus is reached.

Like the nominal group technique, the Delphi technique insulates group members from the undue influence of others. It also does not require the physical presence of the participants. So, for instance, Minolta could use the technique to query its sales managers in Tokyo, Hong Kong, Paris, London, New York, Toronto, Mexico City, and Melbourne as to the best worldwide price for one of the company's new cameras. The cost of bringing the executives together at a central location is avoided, yet input from Minolta's major markets is obtained. Of course, the Delphi technique has its drawbacks. The method is extremely time-consuming. It is frequently not applicable when a speedy decision is necessary. Further, the method might not develop the rich array of alternatives that the interacting or nominal groups do. The ideas that might surface from the heat of face-to-face interaction might never arise.

electronic meetings
Decision making groups that interact by way of linked computers.

Electronic meetings   The most recent approach to group decision making blends the nominal group technique with sophisticated computer technology.[40] It's called the **electronic meeting.**
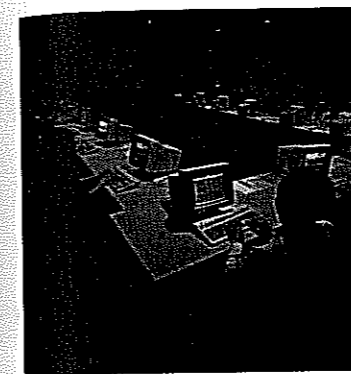
IBM uses electronic meetings to bring people from diverse backgrounds in the company together. More than 7000 IBMers have taken part in these meetings.

Once the technology for the meeting is in place, the concept is simple. Up to fifty people sit around a horseshoe-shaped table that is empty except for a series of computer terminals. Issues are presented to participants and they type their responses onto their computer screens. Individual comments, as well as aggregate votes, are displayed on a projection screen in the room.

The major advantages to electronic meetings are anonymity, honesty, and speed. Participants can anonymously type any message they want, and it will flash on the screen for all to see at the push of a board key. It also allows people to be brutally honest with no penalty. And it's fast—chitchat is eliminated, discussions don't digress, and many participants can "talk" at once without stepping on others' toes.

Experts claim that electronic meetings are as much as 55 percent faster than traditional face-to-face meetings.[41] Phelps Dodge Mining, for instance used the approach to cut its annual planning meeting from several days down to 12 hours. However, there are drawbacks. Those who can type quickly can outshine those who may be verbally eloquent but are lousy typists; those with the best ideas don't get credit for them; and the process lacks the informational richness of face-to-face oral communication. But because this technology is currently only in its infancy, the future of group decision making is very likely to include extensive usage of electronic meetings.

Summary

This summary is organized by the chapter-opening learning objectives found on page 149.

1. Decision making is an eight-step process: (1) formulation of a problem, (2) identification of decision criteria, (3) allocation of weights to the criteria, (4) development of alternatives, (5) analysis of alternatives, (6) selection of an alternative, (7) implementation of the alternative, and (8) evaluation of decision effectiveness.

2. The rational decision maker is assumed to have a clear problem, have no goal conflict, know all options, have a clear preference ordering, keep all preferences constant, have no time or cost constraints, and select a final choice that maximizes his or her economic payoff.

3. Rationality assumptions don't apply in many situations because (1) an individual's information-processing capacity is limited; (2) decision makers tend to intermix solutions with problems; (3) perceptual biases distort problem identification; (4) information may be selected more for its accessibility than for its quality; (5) decision makers often have favorite alternatives that bias their assessment; (6) decision makers sometimes increase commitment to a previous choice to confirm its original correctness; (7) prior decision precedents constrain current choices; (8) there is rarely agreement on a single goal; (9) decision makers must face time and cost constraints; and (10) most organizational cultures discourage taking risks and searching for innovative alternatives.

4. In the perfectly rational decision-making process: (1) the problem identified is important and relevant; (2) all criteria are identified; (3) all criteria are evaluated; (4) a comprehensive list of alternatives is generated; (5) all alternatives are assessed against the decision criteria and weights; (6) the decision with the highest economic outcome is chosen; (7) all organizational members embrace the solution chosen; and (8) the decision's outcome is objectively evaluated against the original problem.

5. In the boundedly rational decision-making process: (1) the problem chosen is visible and reflects the manager's interests and background; (2) a limited set of criteria is identified; (3) a simple model is constructed to evaluate criteria; (4) a limited set of similar alternatives is identified; (5) alternatives are assessed one

at a time; (6) the search continues until a satisficing solution is found; (7) politics and power influence decision acceptance; and (8) the decision's outcome is evaluated against the self-interests of the evaluator.

6. Managers face well- and ill-structured problems. Well-structured problems are straightforward, familiar, easily defined, and solved using programmed decisions. Ill-structured problems are new or unusual, involve ambiguous or incomplete information, and are solved using non-programmed decisions.

7. The ideal situation for making decisions occurs when the manager can make accurate decisions because he or she knows the outcome from every alternative. Such certainty, however, rarely occurs. A far more relevant situation is one of risk, when the decision maker can estimate the likelihood of certain alternatives or outcomes. If neither certainty nor reasonable probability estimates are available, uncertainty exists, and the decision maker's choice will be influenced by his or her psychological orientation.

8. Groups offer certain advantages: more complete information, more alternatives, increased acceptance of a solution, and greater legitimacy. On the other hand, groups are time-consuming, can be dominated by a minority, create pressures to conform, and cloud responsibility.

9. Four ways of improving group decision making are brainstorming, the nominal group technique, the Delphi technique, and electronic meetings.

Review Questions

1. How is implementation important to the decision-making process?
2. What is a *satisficing* decision?
3. What's the difference between a *rule* and a *policy?*
4. Why would an organization's senior executives favor developing a wide range of programmed decisions for middle- and lower-level managers?
5. Why might a manager use a simplified decision model?
6. Is the order in which alternatives are considered more critical under assumptions of perfect rationality or bounded rationality? Why?
7. What is *groupthink?* What are its implications for decision making?
8. Is group decision making effective? Efficient?

Discussion Questions

1. Why would decision making be described as "the essence of a manager's job"?
2. How might an organization's culture influence the way in which managers make decisions?
3. Describe a decision you have made that closely aligns with the assumptions of perfect rationality. Compare this with the process you used to select your college. Is there a deviation? Explain.
4. Why do you think organizations have increased the use of groups for making decisions during the past 20 years? When would you recommend using groups to make decisions?

5. Which step in the decision making process do you consider to be most important? Support your position.
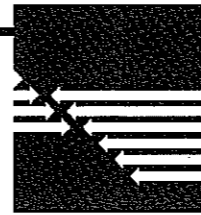
SELF-ASSESSMENT EXERCISE

What's Your Intuitive Ability?

For each of the following questions, select the response that first appeals to you by circling the letter of that response. Be honest with yourself.

1. When working on a project, do you prefer to:
   a. be told what the problem is, but left free to decide how to solve it?
   b. get very clear instructions about how to go about solving the problem before you start?

2. When working on a project, do you prefer to work with colleagues who are:
   a. realistic?
   b. imaginative?

3. Do you admire people most who are:
   a. creative?
   b. careful?

4. Do the friends you choose tend to be:
   a. serious and hard working?
   b. exciting and often emotional?

5. When you ask a colleague for advice on a problem you have, do you:
   a. seldom or never get upset if he/she questions your basic assumptions?
   b. often get upset if he/she questions your basic assumptions?

6. When you start your day, do you usually:
   a. seldom make or follow a specific plan?
   b. make a plan first to follow?

7. When working with numbers, do you find that you:
   a. seldom or never make factual errors?
   b. often make factual errors?

8. Do you find that you:
   a. seldom daydream during the day and really don't enjoy doing so when you do it?
   b. frequently daydream during the day and enjoy doing so?

9. When working on a problem do you:
   a. prefer to follow the instructions or rules when they are given to you?
   b. often enjoy circumventing the instructions or rules when they are given to you?

10. When you are trying to put something together, do you prefer to have:
    a. step-by-step written instructions on how to assemble the item?
    b. a picture of how the item is supposed to look once assembled?

11. Do you find that the person who irritates you *the most* is the one who appears to be:
    a. disorganized?
    b. organized?