Chapter 16
Decision Making

Chapter Outline

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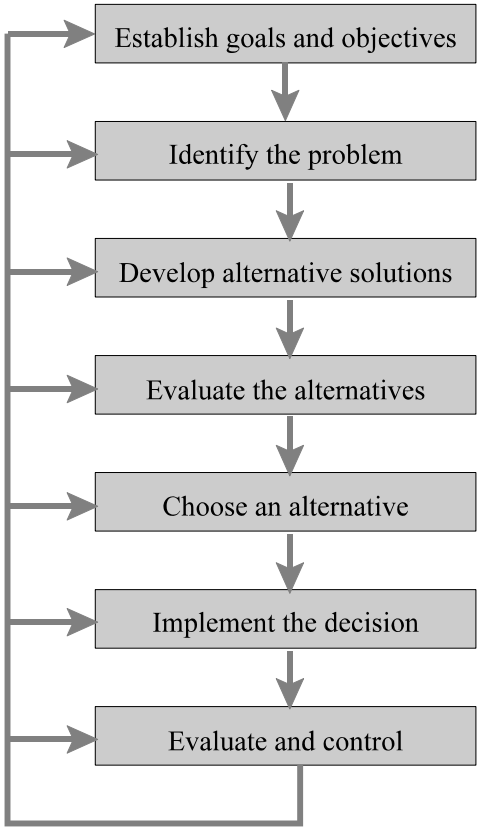
Individual Decision Making

The Decision Making Process

The basic elements of the rational decision-making process consist of establishing goals and objectives, identifying problems, developing and evaluating alternatives, choosing an alternative and implementing it, and evaluating its results. This model is derived from classical decision theory which assumes that people are rational decision makers who have immediate access to all relevant information, who can identify all feasible solutions and evaluate them, and who will always select the best alternative.



This model outlines the elements in the normal decision-making process and identifies some of the obstacles inhibiting effective decision-making. Knowing the elements in this decision-making process can help you avoid feelings of frustration and uncertainty when problems arise. For example, if the person who normally drives you to work tells you that will need to find other transportation, you might feel temporarily overwhelmed by this problem until you systematically go through the decision-making process to solve it. Your objective is to be to work on time every day without spending much money on transportation, and your problem is that you do not

have a way to get there. Alternatives might include taking public transportation, finding a new car pool, making a new friend at work who could drive you, or buying a new car or bicycle. You would need to evaluate the pros and cons of each of these alternatives relative to your goals and objectives and then select the best one. After you implement your decision you may re-evaluate it and conclude that you did not choose the best decision. For example, if you decided to take the bus but found that it was too slow, you might change your mind and get a bicycle:

Cognitive Limits of Rationality

This rational decision making model is somewhat misleading since it implies that decision making follows a fixed series of logical steps and people are purely rational decision-makers. In reality, individual decision making is far less orderly or systematic than this process suggests. We typically do not make completely rational and well-informed decisions.

Bounded Rationality. The model of the perfectly rational decision maker was challenged by Herbert Simon, a Nobel Prize winner, who suggested that administrators exhibit ***bounded rationality*** rather than perfect rationality.[1] The concept of bounded rationality implies that people are forced to make decisions under a number of external and psychological constraints. People do not have perfect information regarding the problem, nor are they aware of all feasible solutions. And even if this information were available, they would probably not have the mental ability to understand and remember it all, nor would they want to even if they could. The decision maker's ability to analyze only a few things at a time is referred to as ***cognitive limits of rationality***. Contrary to the rational decision maker model, most people explore very few alternatives and make decisions after considering only a small amount of information.

Maximizing Versus Satisficing. A major implication of bounded rationality is that decision makers are *satisficers* rather than *maximizers*. ***Satisficing*** means establishing a minimum level of acceptability for a solution and then evaluating the alternatives until one reaching the minimum level is found. Once we find an alternative that meets the minimum level we accept it and stop searching. The rational decision maker model implies that decision makers are *maximizers* who evaluate all possible solutions against a unitary goal and select the alternative that produces the maximum benefit.

One implication of bounded rationality is that people limit their search for information to the most convenient and inexpensive data. Obtaining information is a double problem: obtaining additional information requires additional time and resources and processing it requires additional time and resources. Decision makers may be inundated with too much information.

Optimizing Versus Suboptimizing. Most decision-making situations involve multiple goals and objectives. For example, the decision to purchase a new machine can be examined in terms of its impact on profitability, employee morale, or environmental contamination. If all the objectives cannot be optimized simultaneously, some will be ***suboptimized***. For example, a new machine could improve the profitability of the company at the expense of employee morale or environmental pollution. In organizations, work groups frequently adopt practices that optimize the rewards to the group but suboptimize the organization's objectives, such as restrictive work rules and the careless use of company resources.

Escalation of Commitment. Once people have made a decision, they tend to feel emotionally committed to their decision and want it to succeed. Most decision makers become ego invested in the projects they endorse, and they are willing to invest additional effort and resources if necessary to assure their success.

This process, which has been referred to as "throwing good money after bad," is also known as "the escalation of commitment."

An example of commitment escalation is when a drug company invests money to develop a new medication. If the first allocation is spent without successfully developing a new product, there is a tendency to allocate more money. Studies suggest that in these situations the more people have already invested, and the closer they believe they are to a new discovery, the more they are willing to invest in further research. The danger is that decision makers can become so ego invested in their decisions that they are blind to contrary information and incapable of objectively evaluating the possibility of failure.[2]

The escalation of commitment does not appear to occur quite as much in group decision making when the group is asked to make a consensus decision. Apparently consensus decision making tends to diffuse the responsibility for the decision onto other group members, thereby reducing the feelings of personal responsibility and the need for self-justification.[3]

Psychological Limitations

Another implication of bounded rationality is that the search for alternative solutions and the process of evaluating them is influenced by the decision maker's attitudes, values, and thought processes. Some of the most important psychological forces influencing the ways people think include the following:[4]

1 *Social Position*. Our thought processes are influenced by our social position in an organization, the family, the community, or society. Our social position influences the information we allow ourselves to be exposed to, what alternatives we consider, and how we evaluate them. Upper-level managers are conditioned to focus on different problems and to analyze them according to different criteria from those used by lower-level managers.

2 *Reference Groups*. Our thinking is influenced by the imaginary or actual groups that we use as a basis for evaluating our ideas. Studies have indicated, for example, that the family unit is a very powerful reference group that influences an individual's work habits.[5]

3 *Projection of Attitudes and Values*. We tend to project our own attitudes and values onto others and assume that their attitudes and values are similar to ours. This tendency causes us to make errors when we falsely assume that others have the same interests and desires we do.

4 *Global or Undifferentiated Thinking*. Undifferentiated thinking is thinking about a concept or an object as one homogeneous idea without appreciating that the concept may actually consist of numerous subconcepts that should be considered separately. Russia, for example, is not simply one large, homogeneous country but a very diverse nation with many ethnic groups possessing a vast array of political, economic, and religious views.

5 *Dichotomized Thinking*. People tend to view the world in terms of opposites – good or bad, right or wrong, high or low – without realizing that some issues are both good and bad or perhaps neutral. For example, most people have firmly entrenched attitudes that labor unions are either good or bad, without realizing that in some situations and for specific problems unions can be either good or bad.

6 *Cognitive Nearsightedness*. Most people have a tendency to respond to that which is urgent, immediate, and visible and to neglect problems that may be more significant but removed in time and place.

7 *Oversimplified Explanations of Causation*. When diagnosing problems we consider only a limited number of variables without remembering that some events are caused by many forces. Simple linear thinking, such as A causes B, can create serious decision-making problems when A, B, C, and D all influence each other.

Personality Determinants

Our decisions are also influenced by the following personality orientations:[6]

1 *Ideology Versus Power*. Some people base their decisions on ideology– a coherent philosophy or set of principles. Others base their decisions on what appears to be politically expedient and serves to increase their own personal power. Social reform movements typically have leaders who have a very strong ideology orientation, while politicians tend to be influenced more by power. Significant organizational contributions are typically made by leaders with a strong ideology orientation.

2 *Emotionality Versus Objectivity*. Some people make decisions with their hearts based on feelings and emotions, while others make decisions with their heads using objective facts. The first would hire a friend who applied for a job, while the second would offer the job to the friend only if the friend were the most qualified candidate.

3 *Creativity Versus Common Sense*. Some people try to redefine each problem and discover new relationships and creative solutions to it. Other people tend to focus more on what has worked in the past and what seems to make good sense.

4 *Action Orientation Versus Contemplation*. Some people have a propensity for action and want to make things happen. Others are more prone to contemplation and have a greater interest in exploring the possible solutions and implications.

Group Decision Making

A common method for making organizational decisions is to delegate the task to a group and ask the members to reach a group decision. As a general rule, the most complex problems in organizations are assigned to committees, task forces, and other decision-making groups for a solution. Since so many decisions are made by groups, it is important to understand the effects of groups on the decision-making process and know how to improve that process.

Individual Versus Group Decision Making

If a manufacturing company needed to know where to locate a new production facility it could delegate this problem to one person, but it would more likely be assigned to a committee. Group decisions are expected to be superior because:

1 they are more accurate since they have a larger reservoir of insight and knowledge than a single individual.
2 they produce greater commitment and acceptance of the decision.
3 they are implemented more quickly since everyone understands the decision.
4 they are more consistent with the democratic values espoused by our society.

However, committee decision making has also been criticized because:
1 committee meetings are a waste of time for the members who attend them.
2 their decisions are notoriously slow; indeed some executives assign unpopular issues to a committee knowing that the issue will die before the committee ever reaches a decision.
3 their recommendations are biased by one or two dominant people who manipulate the group.
4 the decision may be an irrational compromise for which no one is willing to accept responsibility.

Just because several people participated in making the decision does not mean that the decision is more effective or brilliant than any member could have produced alone. Some of the assets and liabilities of groups are listed in Exhibit 16.1. Group size is relevant since larger groups enhance the value of the assets and exacerbate the liabilities. Although groups generally are superior to individuals in making decisions, their superiority is not universal. A comparison of individual versus group decision making must consider these four criteria: accuracy and judgment, creativity, commitment and acceptance, and time and cost.

Exhibit 16.1 Assets and Liabilities of Groups in Making Decisions

Assets of Groups
1. Greater knowledge and information
2. Greater variety of approaches to a problem
3. Increased acceptance of the decision
4. Reduced communication problems
Liabilities of Groups
1. Social pressures to conform
2. Loss of valuable time of group members
3. Hasty convergence on a solution
4. Possibility of control by a dominant individual
5. Distraction by hidden agenda and secondary goals
6. Insufficient time to reach a decision
7. Problems with disagreement and interpersonal conflicts
8. Possibility that the final decision will be an irrational compromise

Accuracy and Judgment. As a general rule, group decisions tend to be more accurate than individual decisions, but for only certain kinds of problems. Group decisions tend to be superior when (1) the problems have multiple parts, allowing for a division of labor among the group members, (2) group members have complementary skills and information, (3) the problem involves estimation rather than creativity, or (4) the problem involves remembering information.

In contrast, individual decision making tends to be superior when (1) the situation requires a sequence of multiple stages, (2) the problem is not easily divided into separate parts, and (3) the correctness of the solution cannot be easily demonstrated.

For example, a group decision would normally be superior to an individual decision in developing a new product. This decision requires information from several different functional departments within the organization, including accounting, finance, marketing, production, and legal. It is virtually impossible for any single individual to comprehend adequately all these areas of knowledge, and experts from each area would need to be consulted even if individuals tried to make the decision alone. A committee composed of experts from each area has the potential to make a more accurate decision.

The mere presence of complementary information, however, does not guarantee a superior decision. Various group dynamics may inhibit the group from effectively sharing information or using it to make a good decision. The status and expertise of group members can interfere with the deliberations of the group. For example, the presence of a perceived expert or a higher-level manager tends to create an autocratic rather than a democratic group atmosphere. Their presence inhibits the open exchange of ideas, and their comments are usually not challenged or reviewed as critically as the comments of others.

In the decision-making process, group members need to challenge the information and assumptions of other members and strive to reach a consensus decision. Guidelines for effective group decision making are presented in Exhibit 16.2.

EXHIBIT 16.2 Guidelines for Achieving Consensus in Group Decisions

1. Avoid arguing for your own position. Present your position as lucidly and logically as possible, but listen to the other members' reactions and consider them carefully before you press your point.

2. Do not assume that someone must win and someone must lose when the discussion reaches a stalemate. Instead, look for the next-most-acceptable alternative for all parties involved.

3. Do not change your mind simply to avoid conflict and to reach agreement and harmony. When agreement seems to come too quickly and easily, be suspicious. Explore the reasons and be sure everyone accepts the solution for basically similar or complementary reasons. Yield only to positions that have objective and logically sound foundations.

4. Avoid conflict-reducing techniques such as a majority vote, averages, coinflips, and bargaining. When dissenting members finally agree, don't feel that they must be rewarded by having their way on some later point.

5. Differences of opinion are natural and expected. Look for them and try to involve everyone in the decision process. Disagreements can help the group's decision because a wide range of information and opinions increases the chance that the group will find a more adequate solution.

Group decisions are generally more accurate than individual decisions on estimation problems. Estimating the size of an audience, forecasting the demand for next year's sales, and guessing how many items of inventory are in a large container are examples of problems that generally produce superior

decisions by groups. The group decision is generally more accurate than the average of the individual decisions.

An example of a problem that is more conducive to individual decision making than group decision making is a problem that involves complex computations, such as developing an inventory-control model or a cost-benefit analysis. Such problems cannot be easily subdivided and delegated to group members, and they involve a sequence of multiple stages requiring the concentration of one individual rather than many.

Through experience and training, group members can learn how to make more effective decisions. Effective groups make consensus decisions that are typically superior to the group average or the level of the most knowledgeable member. Consensus decisions are superior to other techniques, such as majority votes, coin tosses, or autocratic pronouncements. A longitudinal study of student groups who worked together for a semester on class projects and exams found that the group outperformed the most proficient member 97 percent of the time. The average improvement of the group's score over the most knowledgeable member's score was 8.8 percent. Therefore, on tasks that require analyzing, synthesizing, and remembering information the optimal decision-making strategy appears to be consensus group decision making.[7]

Creativity. As a general rule, individual decision making generates higher levels of creativity than group decision making. Research studies show that group decision making tends to inhibit creativity, and individuals working alone produce ideas of higher quantity and quality than individuals working in a group.[8] These conclusions, however, are not consistent with common wisdom: most people believe that groups are more creative than individuals.

The myth about the superiority of group creativity originated with a technique called ***brainstorming***.[9] The purpose of this technique was to enhance creativity through group discussions and it was particularly recommended to help advertising executives develop new promotional ideas. In a group brainstorming session, individuals are instructed to concentrate on a topic and express every idea that comes to mind regardless of how outlandish or absurd the thought may be. Criticizing another's ideas is not allowed; in fact, members are encouraged to think about absurd ideas with the hope that they will eventually stimulate a totally novel and creative solution.

Although brainstorming continues to be used quite frequently, some of the enthusiasm for it declined when studies failed to support its claims. One study compared the creativity of four individuals working together as a group versus four individuals working alone.[10] Four problems were used in this study: one concerning the problems of handling increased school enrollments in subsequent decades, one seeking ways to increase tourism in America, one assessing the advantages and disadvantages of being born with an extra thumb on each hand, and one assessing the consequences to society if the average adult height increased by 10 inches. Each group of 4 individuals worked together on two of these problems and alone on the other two.

The results indicated that individuals consistently generated a greater number of nonredundant ideas when working alone than when working in a group. A panel of judges evaluated the quality of each idea, and the results indicated that individuals working alone not only produced more ideas, but their ideas were superior to when they were working in a group. These results are consistent with the results of other studies indicating that group processes inhibit creativity. Even though people in a brainstorming group are instructed to ignore the influence of the group, they cannot entirely ignore the presence of others.

Generating new ideas is apparently an individual thought process that requires concentration and insight, and it seems to be inhibited by the presence of others.

One reason why brainstorming continues to be used is because it at least forces people to think about the problem. If they were by themselves concentrating on the problem, they might be more creative, but they would probably think of something else. A second reason why brainstorming might be helpful is because it teaches members how to engage in divergent thinking. A brief experience in a brainstorming group might help newcomers grasp the freewheeling nature of divergent thinking.

One technique designed to minimize the distraction of the group in brainstorming sessions is to require people to speak in sequence or to pass if they have no ideas to contribute. This technique prevents one individual from dominating the discussion and helps timid members participate more openly. One report indicated that this technique resulted in an 80 percent increase in the number of ideas generated over the normal brainstorming technique.[11]

Commitment and Acceptance. When people participate in making a decision, they feel greater commitment and loyalty to the decision and are willing to commit more of their own time and energy to implement it successfully. Furthermore, there is a greater chance that the solution will be implemented properly, since people will have a better understanding of the situation.

The powerful influence of participative decision making was revealed in an early series of studies on the food selections of homemakers. During World War II several food items were in short supply because the country was committed to providing one pound of meat per day for every American soldier. In spite of the shortage of desirable cuts of meat, there was a surplus of undesirable items, especially brains, kidneys, and tripe, which are an excellent source of protein and minerals. Although these undesirable animal parts are nutritious and Europeans considered them edible and even delicacies, American consumers refused to eat them.

Government food experts asked Kurt Lewin to study the conditions necessary for changing eating habits. Kurt Lewin, a leader in the field of group dynamics, believed that participating in a group discussion would influence the level of commitment and acceptance of the group members. Using groups of homemakers and Red Cross volunteers, Lewin had some women participate in a group decision while others listened to a persuasive communication.[12] In the persuasive sessions, the women listened to panels of experts describe the value of the undesirable products and exhort them to support the government's efforts. In the group decisions, experts were available to answer questions, but the women were expected to discuss the pros and cons of eating the undesirable animal parts and reach a consensus.

The effects of these conditions were assessed by observing what the women actually purchased and consumed two and four weeks after the session. The results indicated that the group discussions had a much greater influence than the lectures. After four weeks, the consumption of kidneys, brains, and hearts increased 32 percent among those who participated in the group decisions but only 3.7 percent among those who attended the lectures. The group discussions were also found to have a much greater impact than the lectures on the consumption of other products such as evaporated milk and cod liver oil. Subsequent research has produced similar results and helped to identify the factors in group decision making that contribute to commitment and behavior change. Group decisions reached by consensus create intense social pressures for individuals to accept the group decision and follow it. Unlike the individuals who attend a lecture, group members are forced to reach a decision and publicly declare their intention. Furthermore, their decision to change is reinforced by observing the change in others.[13]

Time and Cost. Although group decision making has the advantage of creating greater acceptance and commitment, these benefits are not free: group decisions can be very time consuming. If the decision is accompanied by conflict, some groups never reach a decision. A management strategy for delaying an issue or avoiding it altogether is to delegate it to a committee without appointing a leader. If the committee is large enough, there is a good chance it will never succeed in recommending a solution.

The enormous cost associated with committee assignments can be estimated by counting the number of employee hours executives spend in committees and calculating the total cost of a meeting based on the hourly rate of the members in attendance. As the size of the committee increases, both the length of time needed to reach a decision and the cost of the meeting increase dramatically. When speed in reaching a decision is a major factor, group decision making with large groups should be avoided.

Group Influences on Decisions

The presence of others has a significant influence on the way people make decisions. Although the combined efforts of several people should increase the acquisition, retention, and recall of relevant information, studies of group remembering and decision making have found that the dynamics of the group often prevent it from making a good decision. Decision-making groups have often been observed to fumble in search of relevant information until one member claims to recall it. If the information, right or wrong, is asserted with enough conviction, it may be accepted by the group, who then confer expert status on the individual who provided the information. Groups also have a tendency to selectively recall information supporting only one side of an issue and selectively suppress or ignore information consistent with an opposing position. The influence of the group can be analyzed by examining changes in risk taking and a phenomenon called "group-think."

Risk Taking. Decision making typically involves some degree of risk and uncertainty, and an important question is whether group decisions tend to be more risky or more conservative than the decisions of individuals. For example, a traditional principle of military leadership is that individuals, not groups, should make decisions because groups are not capable of the boldness and courage needed for a successful military strategy. This principle assumes that group decisions tend to be conservative.

Early research studies found just the opposite, however: group decisions tended to be more risky than individual decisions. Individuals were asked to review hypothetical cases involving career choices, investment decisions, and medical operations. In each case they were faced with a dilemma requiring them to choose between a relatively safe alternative with a moderate payoff and a riskier alternative with a higher potential payoff, such as a secure job with a big corporation or an uncertain job with a new but potentially more rewarding and exciting company and a larger salary. Individuals were asked to determine the highest level of risk they would tolerate before rejecting the uncertain alternative. After reaching their individual decisions, they were formed into groups where they discussed each case and reached a consensus decision. The early results indicated that groups were willing to make more risky decisions, and this effect was called the ***risky-shift phenomenon***.[14]

Early attempts to explain why groups made more risky decisions focused on the ***diffusion of responsibility***. According to this explanation, individual decision makers are more conservative because they are totally responsible for their decisions. If the consequences are bad, the individual must bear the full responsibility for failure. However, groups need not be so conservative, since the criticism for a bad decision can be shared by the entire group.

Although diffusion of responsibility was a reasonable explanation, additional studies found that some groups produced conservative shifts in which the group decisions were less risky than the individual decisions. It is now clear that group discussion can produce both risky and conservative shifts in a wide variety of settings, such as investment, purchasing, and termination decisions. In addition to the diffusion of responsibility, two additional explanations have been proposed to explain the effects of groups on risk taking: the polarization explanation and the cultural values explanation. The ***polarization*** explanation suggests that the group discussion seems to polarize or exaggerate the initial positions of group members. While the initial positions of individuals tend to be only slightly conservative or risky, they tend to move toward the nearest end of the continuum as a result of the group discussion. Thus, individuals who are only slightly risky before the group discussion adopt a much more risky position afterward, while people who are only a little conservative become much more conservative after the discussion. If the majority of the group members are slightly risky, the discussion will produce a risky shift, while a conservative shift will occur if the majority of the group members are slightly conservative.

The ***cultural values*** explanation for changes in risk taking suggests that the group discussion tends to reinforce the dominant cultural values. If the dominant social value tends to be conservative, such as saving the life of the mother in abortion decisions, then the group discussion tends to produce a conservative shift. However, if the dominant social value tends to be risky, such as investing in a new product, the group decision tends to produce a risky shift.[15]

Groupthink. Although group decision making provides several potential advantages, one of the most serious disadvantages is the phenomenon identified by Irving Janis called ***groupthink***. Groupthink occurs in highly cohesive groups when group pressures lead to reduced mental effort, poor testing of reality, and careless moral judgments. Janis has used the phenomenon of groupthink to study several of the major fiascoes involving high-level decisions such as the Bay of Pigs incident of the Kennedy administration, the decision to escalate the war in Vietnam during the Johnson administration, and the failure to adequately protect Pearl Harbor against the Japanese attack during World War II.[16] The destruction of the *Challenger* spacecraft disaster appears to be a more recent illustration of groupthink. Public testimony has suggested that NASA officials failed to heed relevant warnings in their decision to launch another space shuttle mission.[17] Although groupthink does not necessarily occur with all cohesive groups, Janis identified eight of the main symptoms of groupthink.

1 *Illusion of invulnerability.* Group members develop an illusion of invulnerability that leads them to ignore obvious dangers. As a consequence, they become overconfident and willing to assume greater risks.

2. *Rationalization.* Problems and counter arguments that should not be ignored are rationalized away. Group members collectively construct rationalizations to discount warnings or other sources of information challenging their thinking. Therefore, negative information is discredited in the group discussion.

3 *Illusion of morality*. Group members believe unquestioningly in the inherent morality of their position and ignore the ethical or moral consequences of their decisions. The decisions adopted by the group are not only perceived as sensible, they are also perceived as morally correct.

4. *Shared stereotypes.* Members develop stereotyped views about leaders of outside groups. Opposing leaders, for example, are viewed as evil, stupid, or too weak to deal effectively with whatever the group decides. Such stereotypes effectively block any reasonable negotiations between differing groups.

5. *Pressure for conformity.* Members pressure each other to conform with the group views and accept the group consensus. Dissenting views among the members are not acceptable.

6. *Self-censorship.* Group members convince themselves that they should avoid expressing opinions contrary to the group. Personal reservations and doubts are self-censored by members who do not want to "rock the boat."

7. *Illusion of unanimity.* Because no one expresses doubt or disagreement, members perceive unanimous support for the group decision. The group falsely assumes that because no one says otherwise, everyone in the group is in full agreement.

8. *Mind guards.* Just like bodyguards who protect people from physical harm, mind guarding occurs when individual members adopt the role of protecting the group from information that contradicts its decision.

The Bay of Pigs fiasco was a serious embarrassment to President John F. Kennedy and his new administration. On April 17,1961, a brigade of about 1,400 Cuban exiles aided by the U.S. military invaded the coast of Cuba at the Bay of Pigs. The planning for this event had been seriously flawed and inadequate. On the first day none of the four ships containing reserve ammunition and supplies arrived. By the second day the brigade was completely surrounded by 20,000 Cuban troops, and by the third day those who had not been killed were captured and led to prison camps. This embarrassing event forced Kennedy and other top administration officials to carefully review the poor method by which their group decisions had been made.

A careful review of their failure enabled them to respond much more effectively eighteen months later to the Cuban missile crisis, when Soviet missile sites were being constructed in Cuba. This time Kennedy took several precautions to avoid the problem of groupthink. He assigned each cabinet member the role of critical evaluator responsible for voicing objections and doubts; he did not state his personal preferences and expectations at the beginning; he invited outside experts to share information and challenge the views of the group; and he divided the group into subgroups to consider issues separately. By avoiding the problems of groupthink, the Kennedy administration was able to handle the Cuban missile crisis much more successfully than it did the Bay of Pigs invasion.

Very similar to the groupthink phenomenon is the Abilene Paradox. The ***Abilene Paradox*** occurs when members of an organization take an action contrary to what they really want to do and, as a result, defeat the very purposes they are trying to achieve. This label comes from the story of a father, mother, daughter, and son-in-law who endured a miserable trip to Abilene and ate a terrible Sunday dinner, only to discover when they returned home that none of them wanted to go even though they all expressed interest when the idea was first proposed. The Abilene Paradox occurs in organizations when members fail to communicate their true ideas and desires because they think it is better to be agreeable.[18]

To prevent groupthink and the Abilene Paradox, groups should create a climate that tolerates disagreement and accepts debates. Leaders can reduce groupthink if they refrain from expressing their desires, encourage criticism, assign members to express dissenting views, and recruit outside experts to review and assist in decision making.

Programed Conflict. The Abilene Paradox and the groupthink phenomenon occur when group members feel a need to be agreeable and they want to maintain harmony in their deliberations. Conflict threatens

the unity of the group, and members often want to avoid any appearance of disrupting the group. But conflict can also be functional.

Knowing that contrasting viewpoints can improve the quality of a group decision, some groups use a form of programed conflict where opposing arguments are presented in a structured format. The two most prominent forms of programed conflict are the devil's advocacy and dialectical inquiry.

The *devil's advocacy* technique gets its name from the traditional practice used by the Catholic Church when the College of Cardinals considers someone for sainthood. One person is assigned the role of devil's advocate and is expected to expose and examine all possible objections to the person's canonization. When this technique is used in organizations, one member of the group is assigned the role of critic and expected to criticize every proposal and decision. A good devil's advocate challenges and exposes bad ideas, thereby reducing the likelihood of groupthink.

The method of *dialectical inquiry* traces its beginnings to the dialectic school of philosophy in ancient Greece. Plato and his followers developed the art of logically examining issues by discussing a principle (thesis) and then considering its opposite (antithesis). When this approach is used in organizations, the assumptions underlying a proposal are identified, and then a conflicting counterproposal is presented, using different assumptions. Different teams are usually asked to represent each side. Advocates of each position present the merits of their arguments to help a decision maker make an informed decision. This method is used extensively in the legal systems of most countries.

Although the devil's advocacy and dialectical inquiry techniques are slightly different, research indicates that they have about the same effects.[19] Both methods help groups produce higher-quality decisions than the average produced by individual members. It is usually a good idea to rotate the role of critic so no one person or group develops a reputation of being negative and uncooperative. Furthermore, learning to challenge assumptions is good training for developing better analytical skills.

Decision Making in Organizations

The structure of an organization largely determines who is involved in the decision-making process and what kinds of decisions they will make. Whether an organization has a centralized or decentralized organizational structure depends on whether the decision making rests primarily with top-level managers or whether important decisions have been delegated to lower levels in the organization.

In analyzing organizational decision making, we need to understand what kinds of decisions need to be made, who should make them, and what organizational procedures are needed to gather information, evaluate alternatives, and implement a decision.

Types of Decisions

Many different kinds of decisions are made in organizations. Policy decisions made by top administrators influence the entire organization. Other decisions are made lower in the organization and involve very few people, such as scheduling a committee meeting. In analyzing the kinds of decisions made in organizations and the individuals who make them, a useful classification was suggested by Herbert Simon, who distinguished between programed and nonprogramed decisions.[20]

Programed Decisions. *Programed decisions* are repetitive and routine decisions for which a procedure can be developed. Programed decisions are possible when the problems are well structured and when people know how to achieve the desired consequences. These problems are generally rather simple, and their solutions are noncontroversial. College students observe dozens of programed decisions as they interact with the university staff. These decisions are made by lower-level staff members as students register for classes, buy a parking permit, purchase an activity card, request a copy of their grade transcript, apply for graduate school, and try to appeal a parking ticket.

Many complex business decisions are reduced to programed decisions by the use of mathematical formulas, statistics, and operations research. These methods have helped decision makers identify the relevant information and process it in a way that produces a straightforward decision. In some situations, very complex conditions involving a large volume of information can be effectively reduced to a simple decision.

Nonprogramed Decisions. *Nonprogramed decisions* are novel and unstructured decisions. Established procedures cannot be created for handling certain problems, either because they have not occurred in exactly the same manner or because they are extremely complex and important. Nonprogramed decisions are not well structured, either because the current conditions are unclear, the methods of obtaining the desired results are unknown, or there is disagreement about what constitutes a desired result. An example of an unstructured problem that many students experience as they near graduation is deciding whether to attend graduate school and, if so, where. Deciding whether to go to graduate school is not a decision students make every day, and they cannot refer to rules of thumb or standard operating procedures to make this decision. In fact, most students don't even have a clear criterion to help them make the decision; is their goal to maximize their future earnings, acquire knowledge, secure a better job, achieve higher social status, or something else?

Nonprogramed decisions have typically been handled by general problem-solving processes involving intuition, judgment, and creativity. The group decision-making techniques were primarily developed to help make nonprogramed decisions. Because nonprogramed decisions are typically unique, complex, and without a clear criterion, they are usually surrounded by controversy and political maneuvering. An interesting irony is that while modern decision theory has created many decision rules to help with programed decisions, very little exists to help with nonprogramed decisions, and yet nonprogramed decisions have the greatest impact on the survival and effectiveness of an organization.

Ideally, top management should be primarily concerned with nonprogramed decisions, while first-level managers should be more concerned with programed decisions. Unfortunately, many top-level managers spend inordinate amounts of time on programed decisions that should be made much more rapidly and efficiently, leaving time for them to contemplate more significant nonprogramed decisions. Herbert Simon referred to an important principle of organizational decision making called Gresham's Law of Planning. This law suggests that programed activity tends to replace nonprogramed activity. If a leader's job involves both programed and nonprogramed decisions, programed decisions tend to be emphasized at the expense of nonprogramed decisions. Therefore, managers need to identify which decisions should be treated as programed decisions and develop a procedure for handling them quickly and efficiently.

The variables that should determine whether a decision is programed or nonprogramed are the nature of the problem, the frequency with which it occurs, and the degree of certainty involved. To the extent that problems are routine, easily categorized, frequently observed, and exist within fairly stable conditions, they should be treated as programed decisions for which standard operating procedures or policies have been created. For example, deciding whether to contribute to the purchase of new band uniforms for the

local high school or allowing an employee to have two weeks off with pay for military duty may be treated as nonprogramed decisions the first time they occur. But if organizations receive numerous requests for charitable contributions or personal leave time, policies should be created allowing members of the finance and human resource departments to make these decisions without referring them to upper-level managers. Organizational effectiveness suffers when top managers spend considerable time and effort on programed decisions. The unfortunate consequence of this practice is the neglect of long-range planning. Top managers cannot attend to the long-range issues of survival and change if they are overly preoccupied with day-to-day programed decisions.

Decision-Making Techniques

Three decision-making techniques can help organizations make effective decisions: brainstorming, the Delphi technique, and the nominal group technique.

Brainstorming. The purpose of brainstorming is to enhance creativity in group discussions by creating an environment that stimulates the generation of new ideas. The four basic rules of brainstorming include

1. No ideas are criticized.
2. Freewheeling, or the free association of ideas, is encouraged. The more farfetched an idea the better.
3. The quantity of ideas produced is stressed. The larger the number of ideas, the greater the probability of getting a winner.
4. "Hitchhiking" is encouraged; that is, participants are urged to improve on the ideas of others and combine ideas to form new and more complex solutions.

Although brainstorming looks like an effective method for generating creative ideas, empirical results have forced the proponents of brainstorming to be a bit more cautious in their enthusiasm. Consequently, although brainstorming contributes to be a rather popular method for generating new ideas, research suggests that other methods are superior.

The Delphi Technique. The *Delphi technique* was developed by employees at the Rand Corporation as a method of combining the information and insights of a group of people without suffering the adverse effects of face-to-face interaction. The Delphi technique consists of the following steps:

1. After the problem has been identified several experts are asked to participate in the project.
2. The basic problem is presented to each expert, but the experts are not brought together.
3. Each expert, independently and anonymously, answers the problem and provides comments, suggestions, and justifications for the proposed solution.
4. The experts' comments are compiled at a central location, summarized, and reproduced.
5. Each expert receives a summary of the group's answers along with comments and explanations.
6. Each expert evaluates and comments on the justifications provided by the other experts and revises his or her decision if necessary as a result of the comments of others.
7. The explanations and revised estimates of the experts are once again compiled at a centralized location, summarized, and redistributed. Several iterations of compiling and disseminating information may be used until a consensus is reached.

The Delphi technique has two advantages over typical group decision making. First, the absence of face-to-face interaction prevents the group from being swayed by a dominant individual or succumbing to

groupthink. The second advantage is its ability to combine the expertise and wisdom of several people without incurring the cost of meeting at a common location.

The disadvantages of the Delphi technique include time and motivation. Going through successive iterations of collecting information, submitting it to experts, and compiling their revised estimates requires a great deal of time. Without the pressures of face-to-face interaction, some experts tend to procrastinate in responding, and the long gaps of time between each iteration tend to dilute the experts' enthusiasm for participating.

Nominal Group Technique. The *nominal group technique* incorporates some of the features of brainstorming and the Delphi technique. As in brainstorming, individuals work together as a group on a problem, but, as with the Delphi technique, the process for generating alternatives and evaluating them is intended to protect individuals from group biases. The procedure for conducting a nominal group technique consists of the following steps:

1. After the problem has been clearly identified, individual members are asked to develop their own solutions to the problem or task. This step is accomplished silently and independently and may even occur before the individuals are brought together in a group.
2. A recorded round-robin procedure is followed in which group members, one at a time, present one of their ideas to the group without discussion. The ideas are summarized and recorded on a blackboard or sheet of paper.
3. After all the initial ideas have been presented, the group discusses the ideas, clarifying and evaluating them.
4. The meeting concludes with a silent, independent vote in which each member ranks the solutions. The idea with the highest ranking is the group decision.

Since the nominal group technique provides a more structured method for eliciting ideas and evaluating them, larger groups can be used effectively with this technique. Although five or six individuals tends to be the maximum size for typical discussion groups, nominal groups of ten members have been found to be optimal when both productivity and satisfaction are considered.

A high-tech adaptation of the nominal group technique involves electronically compiling information. Group members have access to a computer keypad and during the group discussion the facilitator can ask them to type their ideas into their computers, which are then shown on a screen. Each idea can be examined by asking the participants to evaluate it anonymously using multiple-choice questions. Computer software programs can compile the group decisions instantaneously so all members know the feelings of the group without the biasing effect of strong personalities and powerful individuals.[21]

Studies have examined the effectiveness of the Delphi technique, nominal group technique, and traditional interaction groups. These studies have generally revealed that the nominal and Delphi groups generate significantly more unique ideas than traditional groups, and satisfaction tends to be highest using the nominal group technique than either of the other two.[22]

Discussion Questions

1 How well does the decision making process outlined in the chapter correspond with the actual way you make decisions? Identify a major decision you have made in the past few months, and look for each of these decision-making steps in your behavior.

2 What is bounded rationality? Provide two or three illustrations from your own experience to demonstrate the concept of bounded rationality.

3 What are the reasons why groups sometimes make bad decisions? Identify a time when you were a member of a group that made a bad decision and explain the dynamics that contributed to the process of making a bad decision.

4 What guidelines would you recommend to improve group decision making? Apply these guidelines to a group in which you have participated to explain how it could function better.

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