Job Engagement

7-5 Identify the implications of employee job engagement for managers.

job engagement The investment of an employee's physical, cognitive, and emotional energies into job performance.

When Joseph reports to his job as a hospital nurse, it seems that everything else in his life goes away, and he becomes completely absorbed in what he is doing. His emotions, thoughts, and behavior are all directed toward patient care. In fact, he can get so caught up in his work that he isn't even aware of how long he's been there. As a result of this total commitment, he is more effective in providing patient care and feels uplifted by his time at work.

Joseph has a high level of **job engagement**, the investment of an employee's physical, cognitive, and emotional energies into job performance.[92] Practicing managers and scholars have become interested in facilitating job engagement, believing factors deeper than liking a job or finding it interesting drives performance. Studies attempt to measure this deeper level of commitment.

The Gallup organization has been studying the extent to which employee engagement is linked to positive work outcomes for millions of employees over the past 30 years.[93] They have found there are far more engaged employees in highly successful organizations than in average ones, and groups with more engaged employees have higher levels of productivity, fewer safety incidents, and lower turnover. Academic studies have also found positive outcomes. For instance, one review found higher levels of engagement were associated with task performance and citizenship behavior.[94]

What makes people more likely to be engaged in their jobs? One key is the degree to which an employee believes it is meaningful to engage in work. This is partially determined by job characteristics and access to sufficient resources to work effectively.[95] Another factor is a match between the individual's values and those of the organization.[96] Leadership behaviors that inspire workers to a greater sense of mission also increase employee engagement.[97]

One of the critiques of the concept of engagement is that the construct is partially redundant with job attitudes like satisfaction or stress.[98] However, engagement questionnaires usually assess motivation and absorption in a task, quite unlike job satisfaction questionnaires. Engagement may also predict important work outcomes better than traditional job attitudes.[99] Other critics note there may be a "dark side" to engagement, as evidenced by positive relationships between engagement and work–family conflict.[100] It is possible individuals might grow so engaged in their work roles that family responsibilities become an unwelcome intrusion. Also, an overly high level of engagement can lead to a loss of perspective and, ultimately, burnout. Further research exploring how engagement relates to these negative outcomes may help clarify whether some highly engaged employees might be getting "too much of a good thing."

Integrating Contemporary Theories of Motivation

7-6 Describe how the contemporary theories of motivation complement one another.

Our job might be simpler if, after presenting a half dozen theories, we could say only one was found valid. But many of the theories in this chapter are complementary. We now tie them together to help you understand their interrelationships.

Exhibit 7-9 **Integrating Contemporary Theories of Motivation**

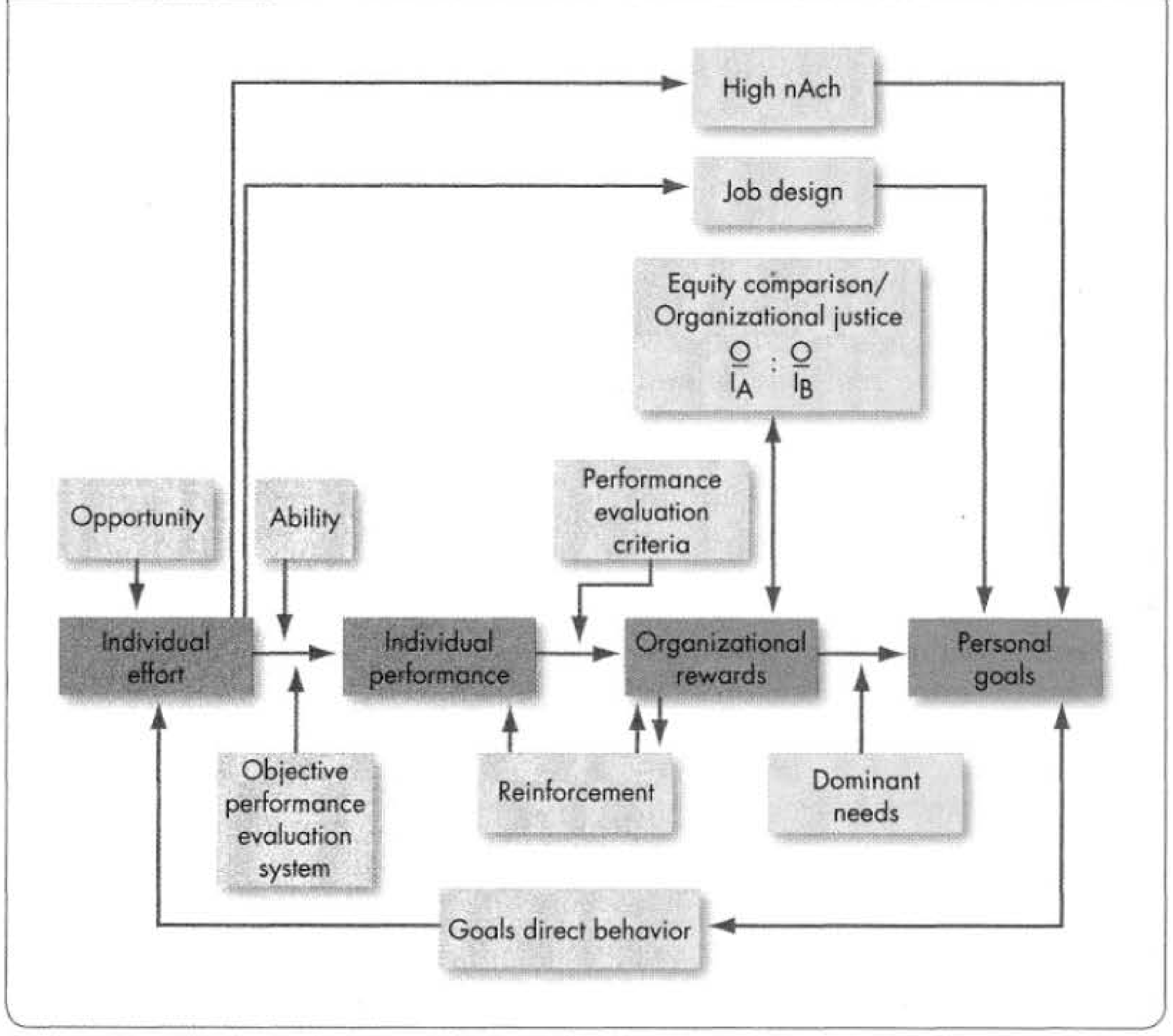

Exhibit 7-9 integrates much of what we know about motivation. Its basic foundation is the expectancy model that was shown in Exhibit 7-8. Let's walk through Exhibit 7-9. (We will look at job design closely in Chapter 8.)

We begin by explicitly recognizing that opportunities can either aid or hinder individual effort. The individual effort box on the left also has another arrow leading into it, from the person's goals. Consistent with goal-setting theory, the goals–effort loop is meant to remind us that goals direct behavior.

Expectancy theory predicts employees will exert a high level of effort if they perceive a strong relationship between effort and performance, performance and reward, and rewards and satisfaction of personal goals. Each of these relationships is, in turn, influenced by other factors. For effort to lead to good performance, the individual must have the ability to perform and perceive the performance appraisal system as fair and objective. The performance–reward relationship will be strong if the individual perceives that performance (rather than seniority, personal favorites, or other criteria) is rewarded. If cognitive evaluation theory were fully valid in the actual workplace, we would predict that basing rewards on performance should decrease the individual's intrinsic motivation. The final link in expectancy theory is the rewards–goals relationship. Motivation is high if the rewards for high performance satisfy the dominant needs consistent with individual goals.

A closer look at Exhibit 7-9 also reveals that the model considers achievement motivation, job design, reinforcement, and equity theories/organizational justice. A high achiever is not motivated by an organization's assessment of performance or organizational rewards, hence the jump from effort to personal goals for those with a high nAch. Remember, high achievers are internally driven as long as their jobs provide them with personal responsibility, feedback, and moderate risks. They are not concerned with the effort–performance, performance–reward, or rewards–goal linkages.

Reinforcement theory enters the model by recognizing that the organization's rewards reinforce the individual's performance. If employees see a reward system as "paying off" for good performance, the rewards will reinforce and encourage good performance. Rewards also play a key part in organizational justice research. Individuals will judge the favorability of their outcomes (for example, their pay) relative to what others receive but also with respect to how they are treated: When people are disappointed in their rewards, they are likely to be sensitive to the perceived fairness of the procedures used and the consideration given to them by their supervisors.

Summary

The motivation theories in this chapter differ in their predictive strength. Maslow's hierarchy, two-factor theory, and McClelland's theory focus on needs. Self-determination theory and related theories have merits to consider. Goal-setting theory can be helpful but does not cover absenteeism, turnover, or job satisfaction. Self-efficacy theory contributes to our understanding of personal motivation. Reinforcement theory can also be helpful, but not regarding employee satisfaction or the decision to quit. Equity theory provided the spark for research on organizational justice. Expectancy theory can be helpful, but assumes employees have few constraints on decision making, and this limits its applicability. Job engagement goes a long way toward explaining employee commitment.

Implications for Managers

- Make sure extrinsic rewards for employees are not viewed as coercive, but instead provide information about competence and relatedness.
- Consider goal-setting theory: Clear and difficult goals often lead to higher levels of employee productivity.
- Consider reinforcement theory regarding quality and quantity of work, persistence of effort, absenteeism, tardiness, and accident rates.
- Consult equity theory to help understand productivity, satisfaction, absence, and turnover variables.
- Expectancy theory offers a powerful explanation of performance variables such as employee productivity, absenteeism, and turnover.

Goals Get You to Where You Want to Be

POINT

Of course this is a true statement. Goal-setting theory is one of the best-supported theories in the motivation literature. Study after study has consistently shown the benefits of goals. Want to excel on a test, lose a certain amount of weight, secure a job with a particular income level, or improve your golf game? If you want to be a high performer, merely set a specific, difficult goal and let nature take its course. That goal will dominate your attention, cause you to focus, and make you try harder.

All too often, people are told by others to simply "do their best." Could anything be more vague? What does "do your best" actually mean? Maybe you feel that your "best" on one day is to muster a grade of 50 percent on an exam, while your "best" on another day is an 80. But if you were given a more difficult goal—say, to score a 95 on the exam—and you were committed to that goal, you would ultimately perform better.

Edwin Locke and Gary Latham, the researchers best known for goal-setting theory, put it best when they said: "The effects of goal setting are very reliable." In short, goal-setting theory is among the most valid and practical theories of motivation in organizational psychology.

COUNTERPOINT

Sure, a lot of research has shown the benefits of goal-setting, but those studies ignore the harm that's often done. For one, how often have you set a "stretch" goal, only to see yourself later fail? Goals create anxiety and worry about reaching them, and they often create unrealistic expectations as well. Imagine those who set a goal to earn a promotion in a certain period of time (a specific, difficult goal), only to find themselves laid off once a recession hit. Or how about those who envision a retirement of leisure yet are forced to take on a part-time job or delay retirement altogether in order to continue making ends meet. When too many influential factors are out of our control, our difficult goals become impossible.

Or, consider this: Goals can lead to unethical behavior and poorer performance. How many reports have you heard over the years about teachers who "fudged" students' test scores in order to achieve educational standards? Another example: When Ken O'Brian, as a professional quarterback for the New York Jets, was penalized for every interception he threw, he achieved his goal of fewer interceptions quite easily—by refusing to throw the ball even when he should have.

In addition to this anecdotal evidence, research has directly linked goal-setting to cheating. We should heed the warning of Professor Maurice E. Schweitzer—"Goal-setting is like a powerful medication"—before blindly accepting that specific, difficult goal.

Sources: E. A. Locke and G. P. Latham, "Building a Practically Useful Theory of Goal Setting and Task Motivation," *American Psychologist* 57 (2002): 705–71; A. Tugend, "Expert's Advice to the Goal-Oriented: Don't Overdo It," *The New York Times*, October 6, 2012, B5; and C. Richards, "Letting Go of Long-Term Goals," *The New York Times*, August 4, 2012.

MacMillan, Karen. "A Zero Wage Increase Again?" Richard Ivey School of Business Foundation, 2011. Reprinted by permission of the publisher.

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A ZERO WAGE INCREASE AGAIN?

Karen MacMillan wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.

The owner of a large hardware, furniture and building centre faced a dilemma regarding how to manage the upcoming wage review process. After two consecutive years of frozen wages, employees were impatient for financial progress, but there was no spare money in the budget. It was possible to pump savings from upcoming process improvement initiatives into wage increases; however, the owner had limited motivation to channel hard-won funds to underperforming employees. On the other hand, he was eager to reward the people who added value. A plan that rewarded only some employees could result in an angry backlash. He had to decide if he wanted to divert the savings into compensation and if so, he needed an effective distribution plan.

As store owner Mark Coglin walked up to the service desk, he heard Simon, the floor manager, finishing a phone conversation. Mark paused at the counter as he listened to the tail end of the interchange. Simon said, "Are you sure you can't make it in? This is kind of leaving me in a bind, Dougie. Yeah, I get it. Okay. Hopefully we'll see you tomorrow." Replacing the receiver into the cradle, Simon glanced up, shrugged in response to Mark's raised eyebrow, and said, "That was Dougie Suzor calling in again. He thinks he has the flu." Mark rolled his eyes and the two men started walking towards the front of the large home hardware and building centre.

Once they were out of earshot of any customers or other staff members, Mark commented under his breath, "It's funny how that flu bug always seems to hit Dougie the Monday following a long weekend."

Simon nodded, and said, "He's not the only one. Four other employees called in before him, and I have a feeling there will be a couple more calls from people whose shifts start in the afternoon."

Mark sighed loudly in exasperation. "What is it about us that makes people think we are dumb, Simon?" He pointed to his freshly-pressed button-up shirt with the company logo embroidered on the left side, and said, "This says the name of the store is 'House, Hearth & Home,' not 'House of the-ones-who-will-believe-anything,' right?" Simon chuckled, but didn't comment or break stride. This wasn't the first time he had heard this joke. Mark continued, "Do they think we're not going to notice that they miss every Monday after a long weekend? Especially when they come in on the Tuesday talking about the great road trip they had. Is it really that likely that they will catch the flu for *one day only* every time? Sheesh."

Simon laughed as he reached for the buzzing cell phone clipped to his belt. After a quick glance at the text display, he paused and shoved several pieces of paper into Mark's hand. Changing direction, he asked over his shoulder, "Would you mind giving these to Donna at the front for me? They're about to send out that order for the Avondale project, and I want to check a few things with Wesley in the yard before it goes." Not waiting for an answer, Simon took off towards the warehouse.

Watching Simon's retreating back, Mark was impressed once again by the dedication he had to doing things right, even though it had unfortunately interrupted his venting. As the floor manager, Simon never had a shortage of issues clamouring for his attention. Somehow he managed to juggle a lot of balls at the same time, very rarely dropping any of them. As one of the owners of House, Hearth & Home, it was very reassuring for Mark to have Simon on the job. He was a key employee.

Mark knew a business as big as his needed employees like Simon. As he made his way to the front of the store, he was able to glimpse only part of the 39,000 square feet devoted to hardware, houseware, and building supplies. An additional 12,000 square feet were filled with home furnishings, leaving 8,000 square feet as warehouse space. No one person could manage the one hundred staff members, the truckloads of inventory, and the annual sales of more than Cdn$20 million. Although every employee could make a difference in the success of the establishment, there were certain employees who would be very hard to replace and Simon was one of them.

After delivering the papers to Donna and chatting with her for a few minutes, Mark walked towards the kitchen department to check out how the new displays looked. Customers really seemed enthusiastic about the kitchen displays, but they took up a lot of valuable floor space. Mark wanted to reassure himself that the new ones were as nice as or even better than the old ones. As he came around the end of an aisle, he noticed Marie and Anne, two employees from the flooring department, talking and laughing as they stocked a shelf. He could hear they were talking about a television show that had been on the night before. Part way down the aisle, a customer was looking perplexed as she scanned the upper shelves. Annoyed, but trying not to show it, Mark smiled as he paused beside Marie and Anne, and said, "I think you have a customer, ladies." Looking around, they acted as though they hadn't noticed her before. Marie mumbled an apology and jumped up to ask her if she needed assistance.

Mark shook his head as he walked away. He thought, "We have trained our employees to make customer service a priority, yet those two acted like that customer was invisible. Why will certain employees not do the right thing unless someone is standing over them? And why do they think I would be so gullible as to believe they hadn't seen her?"

Before he could find an answer to this question, Mark was distracted by the sight of the new kitchen displays. They looked very impressive and he stopped to congratulate the kitchen designer for her good work. Glancing at his watch, Mark realized it was almost time for his meeting with Aaron, the company controller. As he excused himself and started heading towards Aaron's back office, Mark thought about the reason for this meeting and felt a little nervousness in his stomach. He had asked Aaron to figure out if there was any money for wage increases this year. Mark knew enough about the balance sheet to suspect the news would not be good.

Like many other businesses, the global downturn had negatively affected House, Hearth & Home. Sales had shrunk by almost Cdn$4 million a year. Profit margins had tightened or disappeared in several areas. Employees had seemed to understand why there had been no raises in 2009 and in 2010. However, Mark felt it would be hard to sell a zero per cent increase for the third year in a row.

As usual, Aaron was behind his desk with a spreadsheet open on his computer and a cup of coffee half-forgotten amongst the many papers on his desk. With the company for over six years, Aaron adeptly handled many of the accounting and human resource issues, freeing up Mark to spend more time out on the floor troubleshooting. He smiled as Mark came in and said, "Hey, you're right on time. Grab a seat. I'm just printing out a little report for our meeting." The printer behind him started to whirr, and Aaron rolled over in his chair to pull two sheets as they emerged.

Rubbing his eyes as he handed one to Mark, he said, "You asked me if I could find any money for raises this year. Well, I've gone over the latest numbers and the quick answer, I'm afraid, is no." Aaron waited a moment to let Mark scan the sheet before he continued. "As you know, sales have been down, we've written off some old inventory this year, and there have been a few unexpected expenses that have really cut into profits. I've laid it out in broad brush strokes in this table. I don't think any of it will be surprising to you."

Mark exhaled loudly as he began to go through each line with Aaron. He was surprised by how disappointed he was feeling. Listening to Aaron as he walked him through the numbers, Mark let a part of his brain consider why he felt such disquiet at the idea of another year with no increases. What was he afraid would happen? A mutiny? A mass exodus? Sabotage?

The sound of the printer running again made Mark realize that he had not been giving the conversation enough attention. He said, "I'm sorry, Aaron. I didn't catch all of that. What was the last part?"

As he handed Mark another sheet, Aaron replied, "I was saying that the first sheet is a fair accounting of the business. There aren't more than a few thousand spare dollars to go towards raises. However, there may be some ways we can 'find' some money in there."

Mark cleared his throat and asked, "Legally?"

Aaron rolled his eyes and said:

> Of course. I wouldn't recommend anything the auditors would pull apart. I'm just saying that if we change what we're spending money on, we might be able to divert some towards a wage increase. For example, I've heard you say that we're not getting much of a return from our advertising spending. We could "save" some money there. Or there may be room to reduce our inventory even further. Of course, you may decide that savings made by process improvements should go to things other than wages. The downturn isn't over yet. If we do find some money, there are many other places in this company where you could invest it. For example, we could use a better security system. Or we could pay down some of our debt. Or we could do some overdue building maintenance to ensure we look good for the customers. It's a tough decision. You think about it.

Mark looked at the second sheet with interest. Aaron had listed a number of different areas where they could cut expenses or save some money. Some of them had been raised before, but they had never been presented in such a detailed fashion. Beside each he had given an estimate of the dollar amounts that could be saved. If they were able to implement all of these ideas, there would be enough money to give all employees maybe a 2.5 to 3.0 per cent increase. This was a little higher than the annual inflation rate. This type of increase would not make up for the two years of zero increases, but it would be a movement in the right direction.

Mark waited for a sense of relief to wash over him, but for some reason, he did not feel as excited about this news as he had expected. This didn't make sense. He had been so disappointed the moment before when he thought there was no chance. Aaron had given him an opening to make this raise happen.

Knowing that Aaron had put a lot of work into this idea, Mark made an effort to show some enthusiasm and to thank Aaron for his creative thinking. However, he ended the meeting shortly afterwards with an assurance that he would think about everything Aaron had presented. Mark needed to let his thoughts settle down before he could sort them out.

Walking back onto the floor, Mark decided that some fresh air might do him some good. He headed outside to the side yard where the lumber, drywall, and other large materials were transferred directly to customers or to the delivery trucks. He scanned the yard for Wesley, the yard foreman. An eight year employee, Wes had the responsibility to keep the yard organized and safe. When things got sloppy in the yard, accidents increased, people were more likely to get hurt, and inventory was more likely to be lost or damaged. Like Simon the floor manager inside, Wes was always ready to step up and make sure things were done correctly.

Wesley was in the far end of the yard speaking to a young man on a forklift. As Mark walked closer, he could hear them discussing the best way to prep large customer orders. Instead of interrupting, Mark paused to straighten out a pile of lumber that a customer had just finished picking through. At the sound of the forklift moving off, Mark looked up to see Wes watching him work while leaning against a skid of siding.

With a smirk, Mark asked, "You enjoying yourself over there?"

Wes nodded but stepped over to pick up a few boards that had fallen to the ground. Placing them back with the others, Wes said, "Hey, it's not every day that I get to see you actually working."

Looking at the neat pile with satisfaction, Mark straightened out his back and replied, "From what I can see, that young kid is doing most of the work out here."

Wes laughed out loud and said, "Ouch! But good catch, Mark. Kyle is doing a lot out here. I wish I had 10 more just like him. He just brought me another great idea for doing things better. He has only been here for two months, and he already seems to understand how everything should flow together. There are guys who have been here for five years who can't do that." As Wes talked, they watched Kyle expertly maneuver the forklift as he picked an order of drywall for a contractor.

Looking back at Mark, Wes said, "Hey, I don't think you came out here to pick up boards or talk about Kyle. Did you need me to do something?"

Mark shook his head and replied, "Nah. Just hanging out. Maybe I'm wondering if I could leave my problems inside and get a job with you cleaning up the yard. Seems like it would be a lot less stressful, and I could get lots of fresh air. What do you say?"

Wes laughed again, and replied as he looked down at his cell phone, "Sorry, no openings. You don't really want to work here anyway. Kyle would just make you look bad! Gotta go." Wes turned away to sort out a delivery problem that was holding up a job on the other side of town, and Mark found himself on his own again.

Realizing the answers he sought were not in the yard, Mark wandered back to his office. Shutting the door, he turned off his phone and sat back in his leather office chair so he could try again to straighten out his thinking like he had straightened up the pile of lumber.

Pulling out a blank notepad, Mark wrote down the thoughts that were rolling around his head. He knew it was probably unreasonable to ask his employees to accept a wage freeze for the third year in a row. A subgroup of the employees already seemed to dislike their jobs and it was scary to imagine how hard they would be to deal with if their morale level sunk even lower. There were already issues with "lost" inventory—perhaps the employee theft problem would skyrocket if there was no wage increase. Employees who felt cheated might feel entitled to help themselves to a different sort of raise. The store was full of items that most people would want—it would be easy for a disgruntled employee to smuggle some of the smaller items out of the store in lieu of a raise.

The ideas for cost savings given by Aaron could probably be accomplished, but it would be a lot of work. Thinking about the time and effort that would be necessary to make it happen, Mark wasn't sure if he wanted it bad enough. He already worked long hours, six days a week. If he was honest with himself, he had to admit that he was not particularly motivated to find a way to give raises to some of his employees. There were certain employees who didn't even seem to earn the money they were already making. It was hard to justify giving them even more money.

Mark realized that at least 15 per cent of his employees would probably save the company money if they left. These were the people like Dougie who were unreliable, dishonest, incompetent, or always in the middle of the latest workplace drama. It was hard to get motivated to work extra hours for months on end to reward this behaviour.

Of course, there were twice as many really good employees like Kyle. These were the employees that cared about their work and went that extra mile, even when no one was watching. They were the lifeblood of the business. They should be recognized. At the very top of this pile sat Aaron the controller, Simon the floor manager, and Wesley the yard foreman. Mark jotted down a note that it was imperative to show at least these three that they were really appreciated. He also knew that giving a raise to only some people and not others could create new problems.

Mark thought hard about the options scrawled across the page. Should he give an increase to everyone, to no one, or to the deserving minority? Should he do something else entirely? He knew there would be big consequences to any decision he made.

Harnessing the Science of Persuasion

by Robert B. Cialdini

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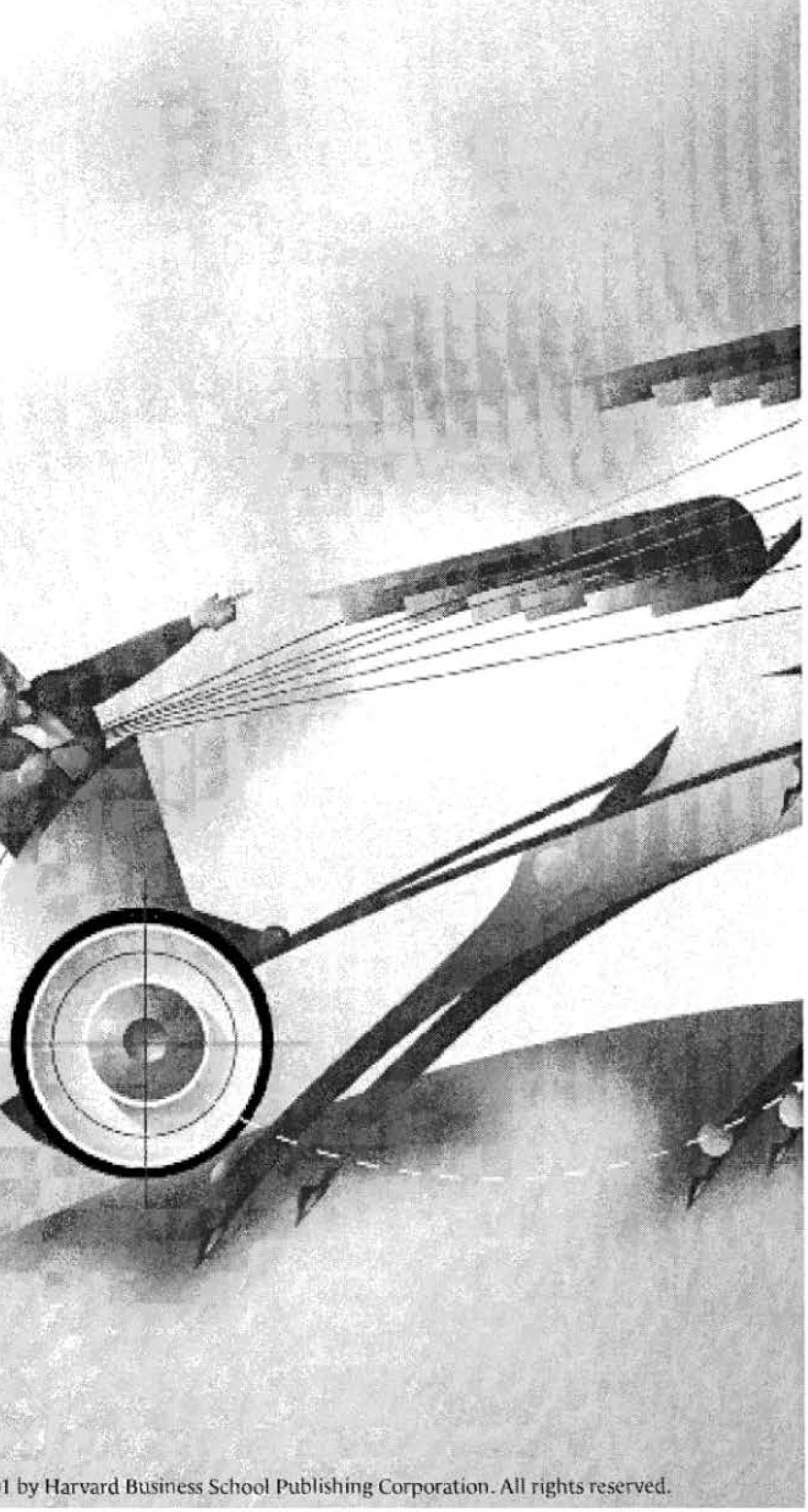
Harnessing the Science of Persuasion

by Robert B. Cialdini

A LUCKY FEW HAVE IT; most of us do not. A handful of gifted "naturals" simply know how to capture an audience, sway the undecided, and convert the opposition. Watching these masters of persuasion work their magic is at once impressive and frustrating. What's impressive is not just the easy way they use charisma and eloquence to convince others to do as they ask. It's also how eager those others are to do what's requested of them, as if the persuasion itself were a favor they couldn't wait to repay.

The frustrating part of the experience is that these born persuaders are often unable to account for their remarkable skill or pass it on to others. Their way with people is an art, and artists as a rule are far better at doing than at explaining. Most of them can't offer much help to those of us who possess no more than the ordinary quotient of charisma and eloquence but who still have to wrestle with leadership's fundamental challenge: getting things done through others. That challenge is painfully familiar to corporate executives, who every day have to figure out how to motivate and direct a highly individualistic work force. Playing the "Because I'm the boss" card is out. Even if it weren't demeaning and demoralizing for all concerned, it would be out of place in a world where cross-functional teams, joint ventures, and intercompany partnerships have blurred the lines of authority. In such an environment, persuasion skills exert far greater influence over others' behavior than formal power structures do.



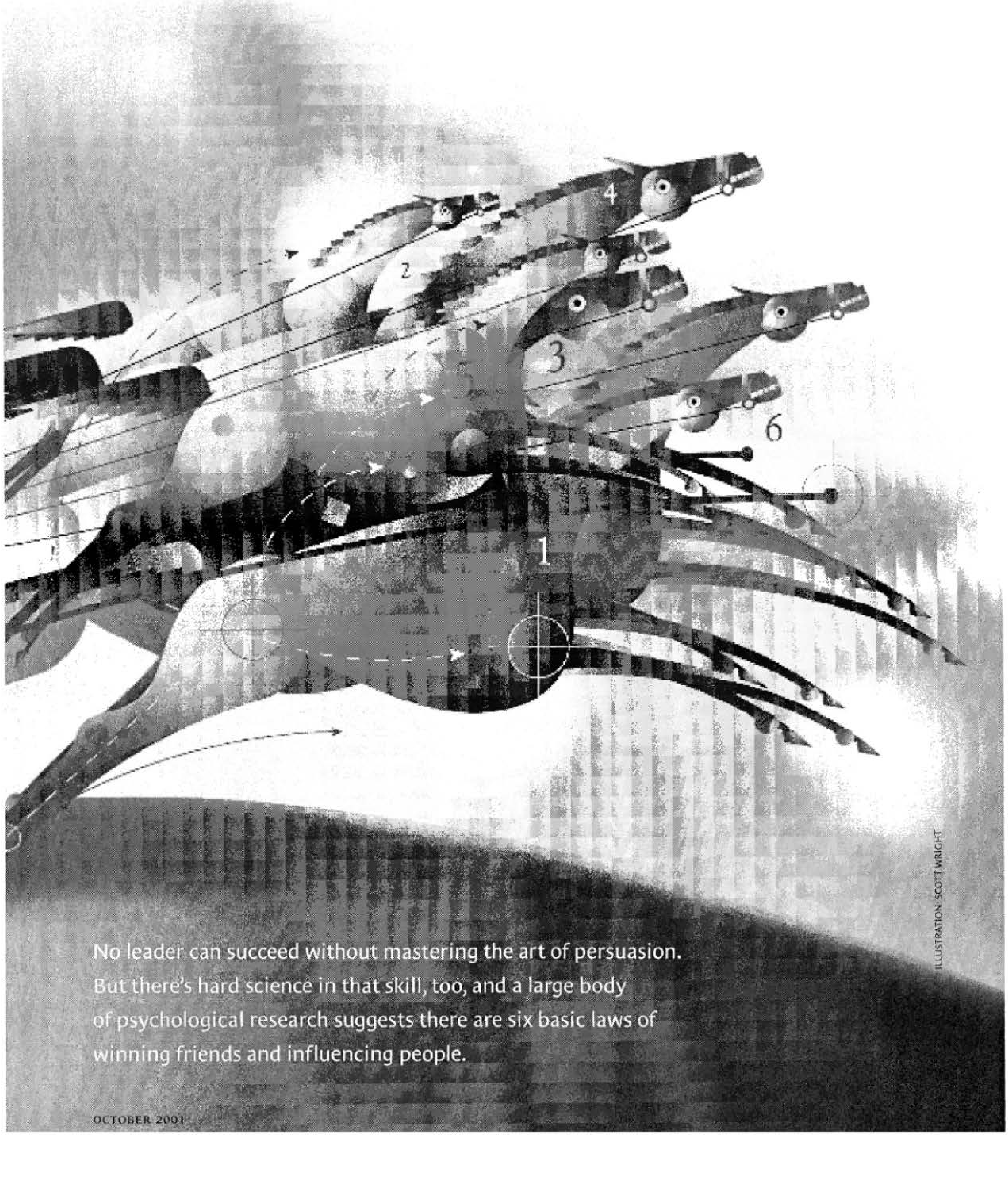


ILLUSTRATION: SCOTT WRIGHT

No leader can succeed without mastering the art of persuasion. But there's hard science in that skill, too, and a large body of psychological research suggests there are six basic laws of winning friends and influencing people.

Which brings us back to where we started. Persuasion skills may be more necessary than ever, but how can executives acquire them if the most talented practitioners can't pass them along? By looking to science. For the past five decades, behavioral scientists have conducted experiments that shed considerable light on the way certain interactions lead people to concede, comply, or change. This research shows that persuasion works by appealing to a limited set of deeply rooted human drives and needs, and it does so in predictable ways. Persuasion, in other words, is governed by basic principles that can be taught, learned, and applied. By mastering these principles, executives can bring scientific rigor to the business of securing consensus, cutting deals, and winning concessions. In the pages that follow, I describe six fundamental principles of persuasion and suggest a few ways that executives can apply them in their own organizations.

The Principle of

Liking:

People like those who like them.

The Application:

Uncover real similarities and offer genuine praise.

The retailing phenomenon known as the Tupperware party is a vivid illustration of this principle in action. The demonstration party for Tupperware products is hosted by an individual, almost always a woman, who invites to her home an array of friends, neighbors, and relatives. The guests' affection for their hostess predisposes them to buy from her, a dynamic that was confirmed by a 1990 study of purchase decisions made at demonstration parties. The researchers, Jonathan Frenzen and Harry Davis, writing in the *Journal of Consumer Research,* found that the guests' fondness for their hostess weighed twice as heavily in their purchase decisions as their regard for the products they bought. So when guests at a Tupperware party buy something, they aren't just buying to please themselves. They're buying to please their hostess as well.

What's true at Tupperware parties is true for business in general: If you want to influence people, win friends. How? Controlled research has identified several factors that reliably increase liking, but two stand out as especially compelling – similarity and praise. Similarity literally draws people together. In one experiment, reported in a 1968 article in the *Journal of Personality,* participants stood physically closer to one another after learning that they shared political beliefs and social values. And in a 1963 article in *American Behavioral Scientists,* researcher F. B. Evans used demographic data from insurance company records to demonstrate that prospects were more willing to purchase a policy from a salesperson who was akin to them in age, religion, politics, or even cigarette-smoking habits.

Managers can use similarities to create bonds with a recent hire, the head of another department, or even a new boss. Informal conversations during the workday create an ideal opportunity to discover at least one common area of enjoyment, be it a hobby, a college basketball team, or reruns of *Seinfeld.* The important thing is to establish the bond early because it creates a presumption of goodwill and trustworthiness in every subsequent encounter. It's much easier to build support for a new project when the people you're trying to persuade are already inclined in your favor.

Praise, the other reliable generator of affection, both charms and disarms. Sometimes the praise doesn't even have to be merited. Researchers at the University of North Carolina writing in the *Journal of Experimental Social Psychology* found that men felt the greatest regard for an individual who flattered them unstintingly even if the comments were untrue. And in their book *Interpersonal Attraction* (Addison-Wesley, 1978), Ellen Berscheid and Elaine Hatfield Walster presented experimental data showing that positive remarks about another person's traits, attitude, or performance reliably generates liking in return, as well as willing compliance with the wishes of the person offering the praise.

Along with cultivating a fruitful relationship, adroit managers can also use praise to repair one that's damaged or unproductive. Imagine you're the manager of a good-sized unit within your organization. Your work frequently brings you into contact with another manager – call him Dan – whom you have come to dislike. No matter how much you do for him, it's not enough. Worse, he never seems to believe that you're doing the best you can for him. Resenting his attitude and his obvious lack of trust in your abilities and in your good faith, you don't spend as much time with him as you know you should; in consequence, the performance of both his unit and yours is deteriorating.

The research on praise points toward a strategy for fixing the relationship. It may be hard to find, but there has to be something about Dan you can sincerely admire, whether it's his concern for the people in his department, his devotion to his family, or simply his work ethic. In your next encounter with him, make an appreciative comment about that trait. Make it clear that in this case

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at least, you value what he values. I predict that Dan will relax his relentless negativity and give you an opening to convince him of your competence and good intentions.

THE PRINCIPLE OF

Reciprocity:

People repay in kind.

THE APPLICATION:

Give what you want to receive.

Praise is likely to have a warming and softening effect on Dan because, ornery as he is, he is still human and subject to the universal human tendency to treat people the way they treat him. If you have ever caught yourself smiling at a coworker just because he or she smiled first, you know how this principle works.

Charities rely on reciprocity to help them raise funds. For years, for instance, the Disabled American Veterans organization, using only a well-crafted fund-raising letter, garnered a very respectable 18% rate of response to its appeals. But when the group started enclosing a small gift in the envelope, the response rate nearly doubled to 35%. The gift – personalized address labels – was extremely modest, but it wasn't what prospective donors received that made the difference. It was that they had gotten anything at all.

What works in that letter works at the office, too. It's more than an effusion of seasonal spirit, of course, that impels suppliers to shower gifts on purchasing departments at holiday time. In 1996, purchasing managers admitted to an interviewer from *Inc.* magazine that after having accepted a gift from a supplier, they were willing to purchase products and services they would have otherwise declined. Gifts also have a startling effect on retention. I have encouraged readers of my book to send me examples of the principles of influence at work in their own lives. One reader, an employee of the State of Oregon, sent a letter in which she offered these reasons for her commitment to her supervisor:

> He gives me and my son gifts for Christmas and gives me presents on my birthday. There is no promotion for the type of job I have, and my only choice for one is to move to another department. But I find myself resisting trying to move. My boss is reaching retirement age, and I am thinking I will be able to move out after he retires....[F]or now, I feel obligated to stay since he has been so nice to me.

Ultimately, though, gift giving is one of the cruder applications of the rule of reciprocity. In its more sophisticated uses, it confers a genuine first-mover advantage on any manager who is trying to foster positive attitudes and productive personal relationships in the office: Managers can elicit the desired behavior from coworkers and employees by displaying it first. Whether it's a sense of trust, a spirit of cooperation, or a pleasant demeanor, leaders should model the behavior they want to see from others.

The same holds true for managers faced with issues of information delivery and resource allocation. If you lend a member of your staff to a colleague who is shorthanded and staring at a fast-approaching deadline, you will significantly increase your chances of getting help when you need it. Your odds will improve even more if you say, when your colleague thanks you for the assistance, something like, "Sure, glad to help. I know how important it is for me to count on your help when I need it."

THE PRINCIPLE OF

Social Proof:

People follow the lead of similar others.

THE APPLICATION:

Use peer power whenever it's available.

Social creatures that they are, human beings rely heavily on the people around them for cues on how to think, feel, and act. We know this intuitively, but intuition has also been confirmed by experiments, such as the one first described in 1982 in the *Journal of Applied Psychology.* A group of researchers went door-to-door in Columbia, South Carolina, soliciting donations for a charity campaign and displaying a list of neighborhood residents who had already donated to the cause. The researchers found that the longer the donor list was, the more likely those solicited would be to donate as well.

To the people being solicited, the friends' and neighbors' names on the list were a form of social evidence about how they should respond. But the evidence would not have been nearly as compelling had the names been those of random strangers. In an experiment from the 1960s, first described in the *Journal of Personality and Social Psychology,* residents of New York City were asked to return a lost wallet to its owner. They were highly likely to attempt to return the wallet when they learned that another New Yorker had previously attempted to do so. But learning that someone from a foreign country had tried to return the wallet didn't sway their decision one way or the other.

The lesson for executives from these two experiments is that persuasion can be extremely effective when it comes from peers. The science supports what most sales professionals already know: Testimonials from satisfied customers work best when the satisfied customer and the prospective customer share similar circumstances. That lesson can help a manager faced with the task of selling a new corporate initiative. Imagine that you're trying to streamline your department's work processes. A group of veteran employees is resisting. Rather than try to convince the employees of the move's merits yourself, ask an old-timer who supports the initiative to speak up for it at a team meeting. The compatriot's testimony stands a much better chance of convincing the group than yet another speech from the boss. Stated simply, influence is often best exerted horizontally rather than vertically.

THE PRINCIPLE OF

Consistency:

People align with their clear commitments.

THE APPLICATION:

Make their commitments active, public, and voluntary.

Liking is a powerful force, but the work of persuasion involves more than simply making people feel warmly toward you, your idea, or your product. People need not only to like you but to feel committed to what you want them to do. Good turns are one reliable way to make people feel obligated to you. Another is to win a public commitment from them.

My own research has demonstrated that most people, once they take a stand or go on record in favor of a position, prefer to stick to it. Other studies reinforce that finding and go on to show how even a small, seemingly trivial commitment can have a powerful effect on future actions. Israeli researchers writing in 1983 in the *Personality and Social Psychology Bulletin* recounted how they asked half the residents of a large apartment complex to sign a petition favoring the establishment of a recreation center for the handicapped. The cause was good and the request was small, so almost everyone who was asked agreed to sign. Two weeks later, on National Collection Day for the Handicapped, all residents of the complex were approached at home and asked to give to the cause. A little more than half of those who were not asked to sign the petition made a contribution. But an astounding 92% of those who did sign donated money. The residents of the apartment complex felt obligated to live up to their commitments because those commitments were active, public, and voluntary. These three features are worth considering separately.

There's strong empirical evidence to show that a choice made actively – one that's spoken out loud or written down or otherwise made explicit – is considerably more likely to direct someone's future conduct than the same choice left unspoken. Writing in 1996 in the *Personality and Social Psychology Bulletin,* Delia Cioffi and Randy Garner described an experiment in which college students in one group were asked to fill out a printed form saying they wished to volunteer for an AIDS education project in the public schools. Students in another group volunteered for the same project by leaving blank a form stating that they didn't want to participate. A few days later, when the volunteers reported for duty, 74% of those who showed up were students from the group that signaled their commitment by filling out the form.

The implications are clear for a manager who wants to persuade a subordinate to follow some particular course of action: Get it in writing. Let's suppose you want your employee to submit reports in a more timely fashion. Once you believe you've won agreement, ask him to summarize the decision in a memo and send it to you. By doing so, you'll have greatly increased the odds that he'll fulfill the commitment because, as a rule, people live up to what they have written down.

Research into the social dimensions of commitment suggests that written statements become even more powerful when they're made public. In a classic experiment, described in 1955 in the *Journal of Abnormal and Social Psychology,* college students were asked to estimate the length of lines projected on a screen. Some students were asked to write down their choices on a piece of paper, sign it, and hand the paper to the experimenter. Others wrote their choices on an erasable slate, then erased the slate immediately. Still others were instructed to keep their decisions to themselves.

The experimenters then presented all three groups with evidence that their initial choices may have been wrong. Those who had merely kept their decisions in their heads were the most likely to reconsider their original estimates. More loyal to their first guesses were the students in the group that had written them down and immediately erased them. But by a wide margin, the ones most reluctant to shift from their original choices were those who had signed and handed them to the researcher.

This experiment highlights how much most people wish to appear consistent to others. Consider again the matter of the employee who has been submitting late reports. Recognizing the power of this desire, you should, once you've successfully convinced him of the need to be more timely, reinforce the commitment by making sure it gets a public airing. One way to do that would be to send the employee an e-mail that reads, "I think your plan is just what we need. I showed it to Diane in manufacturing and Phil in shipping, and they thought it was right on target, too." Whatever way such commitments are formalized, they should never be like the New Year's resolutions people privately make and then abandon with no one the wiser. They should be publicly made and visibly posted.

More than 300 years ago, Samuel Butler wrote a couplet that explains succinctly why commitments must be voluntary to be lasting and effective: "He that complies against his will/Is of his own opinion still." If an undertaking is forced, coerced, or imposed from the outside, it's not a commitment; it's an unwelcome burden. Think how you would react if your boss pressured you to donate to the campaign of a political candidate. Would that make you more apt to opt for that candidate in the privacy of a voting booth? Not likely. In fact, in their 1981 book *Psychological Reactance* (Academic Press), Sharon S. Brehm and Jack W. Brehm present data that suggest you'd vote the opposite way just to express your resentment of the boss's coercion.

This kind of backlash can occur in the office, too. Let's return again to that tardy employee. If you want to produce an enduring change in his behavior, you should avoid using threats or pressure tactics to gain his compliance. He'd likely view any change in his behavior as the result of intimidation rather than a personal commitment to change. A better approach would be to identify something that the employee genuinely values in the workplace – high-quality workmanship, perhaps, or team spirit – and then describe how timely reports are consistent with those values. That gives the employee reasons for improvement that he can own. And because he owns them, they'll continue to guide his behavior even when you're not watching.

THE PRINCIPLE OF

Authority:

People defer to experts.

THE APPLICATION:

Expose your expertise; don't assume it's self-evident.

Two thousand years ago, the Roman poet Virgil offered this simple counsel to those seeking to choose correctly: "Believe an expert." That may or may not be good advice, but as a description of what people actually do, it can't be beaten. For instance, when the news media present an acknowledged expert's views on a topic, the effect on public opinion is dramatic. A single expert-opinion news story in the *New York Times* is associated with a 2% shift in public opinion nationwide, according to a 1993 study described in the *Public Opinion Quarterly*. And researchers writing in the *American Political Science Review* in 1987 found that when the expert's view was aired on national television, public opinion shifted as much as 4%. A cynic might argue that these findings only illustrate the docile submissiveness of the public. But a fairer explanation is that, amid the teeming complexity of contemporary life, a well-selected expert offers a valuable and efficient shortcut to good decisions. Indeed, some questions, be they legal, financial, medical, or technological, require so much specialized knowledge to answer, we have no choice but to rely on experts.

Since there's good reason to defer to experts, executives should take pains to ensure that they establish their own expertise before they attempt to exert influence. Surprisingly often, people mistakenly assume that others recognize and appreciate their experience. That's what happened at a hospital where some colleagues and I were consulting. The physical therapy staffers were frustrated because so many of their stroke patients abandoned their exercise routines as soon as they left the hospital. No matter how often the staff emphasized the importance of regular home exercise – it is, in fact, crucial to the process of regaining independent function – the message just didn't sink in.

> Surprisingly often, people mistakenly assume that others recognize and appreciate their experience.

Interviews with some of the patients helped us pinpoint the problem. They were familiar with the background and training of their physicians, but the patients knew little about the credentials of the physical therapists who were urging them to exercise. It was a simple matter to remedy that lack of information: We merely asked the therapy director to display all the awards, diplomas, and certifications of her staff on the walls of the therapy rooms. The result was startling: Exercise compliance jumped 34% and has never dropped since.

What we found immensely gratifying was not just how much we increased compliance, but how. We didn't fool or browbeat any of the patients. We *informed* them into compliance. Nothing had to be invented; no time or resources had to be spent in the process. The staff's expertise was real – all we had to do was make it more visible.

The task for managers who want to establish their claims to expertise is somewhat more difficult. They can't simply nail their diplomas to the wall and wait for everyone to notice. A little subtlety is called for. Outside the United States, it is customary for people to spend time interacting socially before getting down to business for the first time. Frequently they gather for dinner the night before their meeting or negotiation. These get-togethers can

Persuasion Experts, Safe at Last

Thanks to several decades of rigorous empirical research by behavioral scientists, our understanding of the how and why of persuasion has never been broader, deeper, or more detailed. But these scientists aren't the first students of the subject. The history of persuasion studies is an ancient and honorable one, and it has generated a long roster of heroes and martyrs.

A renowned student of social influence, William McGuire, contends in a chapter of the *Handbook of Social Psychology*, 3rd ed. (Oxford University Press, 1985) that scattered among the more than four millennia of recorded Western history are four centuries in which the study of persuasion flourished as a craft. The first was the Periclean Age of ancient Athens, the second occurred during the years of the Roman Republic, the next appeared in the time of the European Renaissance, and the last extended over the hundred years that have just ended, which witnessed the advent of large-scale advertising, information, and mass media campaigns. Each of the three previous centuries of systematic persuasion study was marked by a flowering of human achievement that was suddenly cut short when political authorities had the masters of persuasion killed. The philosopher Socrates is probably the best known of the persuasion experts to run afoul of the powers that be.

Information about the persuasion process is a threat because it creates a base of power entirely separate from the one controlled by political authorities. Faced with a rival source of influence, rulers in previous centuries had few qualms about eliminating those rare individuals who truly understood how to marshal forces that heads of state have never been able to monopolize, such as cleverly crafted language, strategically placed information, and, most important, psychological insight.

It would perhaps be expressing too much faith in human nature to claim that persuasion experts no longer face a threat from those who wield political power. But because the truth about persuasion is no longer the sole possession of a few brilliant, inspired individuals, experts in the field can presumably breathe a little easier. Indeed, since most people in power are interested in remaining in power, they're likely to be more interested in acquiring persuasion skills than abolishing them.

make discussions easier and help blunt disagreements – remember the findings about liking and similarity – and they can also provide an opportunity to establish expertise. Perhaps it's a matter of telling an anecdote about successfully solving a problem similar to the one that's on the agenda at the next day's meeting. Or perhaps dinner is the time to describe years spent mastering a complex discipline – not in a boastful way but as part of the ordinary give-and-take of conversation.

Granted, there's not always time for lengthy introductory sessions. But even in the course of the preliminary conversation that precedes most meetings, there is almost always an opportunity to touch lightly on your relevant background and experience as a natural part of a sociable exchange. This initial disclosure of personal information gives you a chance to establish expertise early in the game, so that when the discussion turns to the business at hand, what you have to say will be accorded the respect it deserves.

The Principle of Scarcity:

People want more of what they can have less of.

The Application:

Highlight unique benefits and exclusive information.

Study after study shows that items and opportunities are seen to be more valuable as they become less available. That's a tremendously useful piece of information for managers. They can harness the scarcity principle with the organizational equivalents of limited-time, limited-supply, and one-of-a-kind offers. Honestly informing a coworker of a closing window of opportunity – the chance to get the boss's ear before she leaves for an extended vacation, perhaps – can mobilize action dramatically.

Managers can learn from retailers how to frame their offers not in terms of what people stand to gain but in terms of what they stand to lose if they don't act on the information. The power of "loss language" was demonstrated in a 1988 study of California home owners written up in the *Journal of Applied Psychology*. Half were told that if they fully insulated their homes, they would save a certain amount of money each day. The other half were told that if they failed to insulate, they would lose that amount each day. Significantly more people insulated their homes when exposed to the loss language. The same phenomenon occurs in business. According to a 1994 study in the journal *Organizational Behavior and Human Decision Processes*, potential losses figure far more heavily in managers' decision making than potential gains.

In framing their offers, executives should also remember that exclusive information is more persuasive than widely available data. A doctoral student of mine, Amram Knishinsky, wrote his 1982 dissertation on the purchase decisions of wholesale beef buyers. He observed that they more than doubled their orders when they were told that, because of certain weather conditions overseas, there was likely to be a scarcity of foreign beef in the near future. But their orders increased 600% when they were informed that no one else had that information yet.

The persuasive power of exclusivity can be harnessed by any manager who comes into possession of information that's not broadly available and that supports an idea or initiative he or she would like the organization to adopt. The next time that kind of information crosses your desk, round up your organization's key players. The information itself may seem dull, but exclusivity will give it a special sheen. Push it across your desk and say, "I just got this report today. It won't be distributed until next week, but I want to give you an early look at what it shows." Then watch your listeners lean forward.

Allow me to stress here a point that should be obvious. No offer of exclusive information, no exhortation to act now or miss this opportunity forever should be made unless it is genuine. Deceiving colleagues into compliance is not only ethically objectionable, it's foolhardy. If the deception is detected – and it certainly will be – it will snuff out any enthusiasm the offer originally kindled. It will also invite dishonesty toward the deceiver. Remember the rule of reciprocity.

Putting It All Together

There's nothing abstruse or obscure about these six principles of persuasion. Indeed, they neatly codify our intuitive understanding of the ways people evaluate information and form decisions. As a result, the principles are easy for most people to grasp, even those with no formal education in psychology. But in the seminars and workshops I conduct, I have learned that two points bear repeated emphasis.

First, although the six principles and their applications can be discussed separately for the sake of clarity, they should be applied in combination to compound their impact. For instance, in discussing the importance of expertise, I suggested that managers use informal, social conversations to establish their credentials. But that conversation affords an opportunity to gain information as well as convey it. While you're showing your dinner companion that you have the skills and experience your business problem demands, you can also learn about your companion's background, likes, and dislikes – information that will help you locate genuine similarities and give sincere compliments. By letting your expertise surface and also establishing rapport, you double your persuasive power. And if you succeed in bringing your dinner partner on board, you may encourage other people to sign on as well, thanks to the persuasive power of social evidence.

The other point I wish to emphasize is that the rules of ethics apply to the science of social influence just as they do to any other technology. Not only is it ethically wrong to trick or trap others into assent, it's ill-advised in practical terms. Dishonest or high-pressure tactics work only in the short run, if at all. Their long-term effects are malignant, especially within an organization, which can't function properly without a bedrock level of trust and cooperation.

That point is made vividly in the following account, which a department head for a large textile manufacturer related at a training workshop I conducted. She described a vice president in her company who wrung public commitments from department heads in a highly manipulative manner. Instead of giving his subordinates time to talk or think through his proposals carefully, he would approach them individually at the busiest moment of their workday and describe the benefits of his plan in exhaustive, patience-straining detail. Then he would move in for the kill. "It's very important for me to see you as being on my team on this," he would say. "Can I count on your support?" Intimidated, frazzled, eager to chase the man from their offices so they could get back to work, the department heads would invariably go along with his request. But because the commitments never felt voluntary, the department heads never followed through, and as a result the vice president's initiatives all blew up or petered out.

This story had a deep impact on the other participants in the workshop. Some gulped in shock as they recognized their own manipulative behavior. But what stopped everyone cold was the expression on the department head's face as she recounted the damaging collapse of her superior's proposals. She was smiling.

Nothing I could say would more effectively make the point that the deceptive or coercive use of the principles of social influence is ethically wrong and pragmatically wrongheaded. Yet the same principles, if applied appropriately, can steer decisions correctly. Legitimate expertise, genuine obligations, authentic similarities, real social proof, exclusive news, and freely made commitments can produce choices that are likely to benefit both parties. And any approach that works to everyone's mutual benefit is good business, don't you think? Of course, I don't want to press you into it, but, if you agree, I would love it if you could just jot me a memo to that effect.

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8

SOCIAL INFLUENCE, PERSUASION, AND GROUP DECISION MAKING

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Introduction

> Paul is an active member of a fraternity at a private college in the South. During the last few months, his fraternity has been accused of several alcohol-related incidents and is being closely monitored by the local police as well as the college administration. Paul does usually like to party and thinks that beer is a good thing to drink on such occasions. Because of these incidents, however, he has also begun to feel that the alcohol policy of his house might be too lenient. At the same time, he is acutely aware that a vast majority of his fraternity brothers are strongly opposed to tightening their alcohol policy. So he has never openly expressed his opinion on this matter to them.

The kind of situation that Paul faces in the above example is extremely common in everyday life. We live most of our lives in groups. We get ideas about what is right and wrong from what others in the group are saying and doing. Not only that, we also often go along with our group even when we really disagree at heart. At the same time, however, there are many occasions in which we firmly stand up for our opinions and beliefs, even though they conflict with those held by a majority of other members, resist influence from the group, assert our views, and try to persuade the others. And in many cases, we can and do, in fact, influence the course of action the group eventually takes. Thus, to understand persuasion in groups, we have to analyze not only how the individual is influenced by a group but also how he or she influences the group. The organization of the present chapter reflects this consideration.

The first theme of the chapter is *majority influence*, or conformity. Often, individuals change their behavior as a result of having been exposed to opinions, behaviors, or preferences of other individuals in the group. Paul's example above is a case in point. The source of social influence is a majority within the group (the other members of the house) and the recipient of influence is a minority (Paul himself). Keep in mind that influence can occur without any explicit communication. For example, just by observing how the other members behave, Paul probably can figure out what they think about restricting drinking, what are the consequences of agreeing or disagreeing with them on this issue, and the like. As a result of these observations, Paul may change his actions so that they conform with those of the majority, or he may refuse to conform.

No matter how pervasive and powerful conformity pressures may be, individuals are rarely passive recipients of influence from the majority. A minority can also influence the majority. For example, in Paul's case, if the issue of-excessive drinking is important to him, and if he disagrees with the group, he may stand up and express his opinion in front of other house members. In other words, Paul may become an *active minority* and initiate innovative processes in the group. How can a minority influence a majority? Does minority influence work the same way or differently from majority influence? These questions will be the topic for the second section.

In the third section, we will shift gears and discuss persuasion in groups in more natural situations, namely, where members engage in face-to-face discussion. We will ask what social influence processes are at work under these conditions. Finally, we will discuss some pitfalls of group discussion and suggest possible ways to avoid these pitfalls.

Majority Influence

As Barbara Ehrenreich puts it, "The Jacobins of the multiculturalist movement, who are described derisively as P.C., or politically correct, are said to have launched a campus reign of terror against those who slip and innocently say 'freshman' instead of 'freshperson,' 'Indian' instead of 'Native American' or, may the Goddess forgive them, 'disabled' instead of 'differently abled' " (Ehrenreich, 1991, p. 84). This quote vividly illustrates that even though many of us think it silly to confuse verbal purity with a truly enlightened commitment to ethnic and cultural diversity, on many American college campuses today, we often cannot help but feel pressured to conform and use so-called politically correct terms and phrases (see Figure 8-1). Conformity pressure like this, however, has always existed as long as there have been human groups. Not surprisingly, research on this topic can also be

FIGURE 8-1 A hapless college teacher encounters the mandarins of political correctness.

Source: Robert Neubecker.

traced back to the very first years of modern social psychology. Specifically, Sherif (1935) and Asch (1951, 1956) used markedly contrasting procedures to address this same topic, with vastly different results and theoretical implications.

Sherif: Social Influence When Physical Reality Is Ambiguous

Common sense suggests that social influence should be quite substantial when we do not know what the "right" behavior really is. In these circumstances, our *public behavior* will certainly be influenced by what other individuals say and do. Evidence suggests, however, that social influence can go even deeper, changing our private beliefs and perceptions, as well. Sherif (1935) addressed this possibility with ingenuity, using a perceptual illusion called the *autokinetic effect*.

Imagine that we focus our attention on a pinpoint of light in an otherwise completely dark room. Typically, after several seconds, the light will appear to move erratically. The movement is illusory, because the light source is actually stationary. The illusion is due to the absence of any spatial frame of reference that helps locate the light. (Remember that the room is completely dark.) Sherif had subjects simply estimate the size of light movement in inches. When subjects made this judgment alone, their judgment varied within some sizable range. Later, they came together in groups of two or three and made their judgments aloud, one after the other. Discussion was forbidden. Initially, each member of the group stuck to the particular estimate that he or she had made while judging alone, and, as a result, there was considerable disagreement about the precise amount of movement. Over time, however, the judgments began to converge; people began to agree more and more so that eventually their judgments always fell within a rather narrow *common range*. Once this common range, or *group norm*, had been created, each person from then on reported perceiving a similar amount of movement. Interestingly, the subjects continued to respond in accordance with the group norm even when they made a judgment alone and in private, after having left the group. Thus, they were not just going along to avoid disagreement. Exposure to the judgments of others altered their frame of reference (standard) for estimating movement and, hence, their actual perception of movement in this situation. Moreover, they carried the new frame of reference with them and used it outside of the group. In short, the group norm was *internalized*.

Asch: Social Influence When Physical Reality Is Clear

The substantial amount of social influence observed in the Sherif study would seem reasonable because, after all, the stimulus was extremely ambiguous. We might predict, therefore, that once ambiguity is eliminated and the stimulus is clear cut, social influence should disappear. If physical reality is obvious, we should be capable of independent judgment and resist any social influence inconsistent with this reality. With the goal of studying *independence* from others in mind, therefore, Asch (1951, 1956) began a series of experiments. These experiments, however, turned out to be *the* most widely cited demonstrations of *conformity*.

Asch presented a standard line, along with two or three comparison lines, to a group of individuals. Members of the group were to announce, one at a time, which of the comparison lines was identical in length to the standard. This was repeated for many trials with different standard and comparison lines. In every instance, however, the correct answer was obvious; so when the same judgments were made in private, no one made an error. The size of the group varied from condition to condition and from experiment to experiment (see following), although typically, there were several members. Whatever its size, a group always contained only one naive subject, and the remaining individuals were accomplices of the experimenter who had been instructed ahead of time as to the judgments they were to make. The seating was prearranged so that the naive individual would always have to report his judgment next to last. By the time his turn came around, therefore, almost everybody else had made their opinion public. On one-third of the trials, the accomplices were correct and the naive person had no problem going along. On the other two-thirds, however, something mysterious happened in the eyes of the naive subject. All the other members in the group chose what to him was clearly the wrong comparison line.

To his surprise, Asch discovered an appreciable tendency to conform with the majority, even though the position taken by the majority was patently incorrect. On the average, the naive subject conformed with the incorrect majority on more than 30% of the trials. Further, more than 60% of the naive subjects made such a conformity response at least once during the experiment. Having realized the significance of the result, Asch quickly changed the objective of the study 180 degrees from independence to conformity. He thus contributed a classic method of studying majority influence.

Some Cognitive Processes at Work in the Asch Situation

Why does conformity occur, even in the face of undeniable physical reality? Keep in mind that, in the Asch situation, no verbal communication is allowed. Members cannot discuss their differences and argue why they think their judgment is correct. Thus, social influence or persuasion in this situation occurs with minimal social interaction, primarily *within* the mind of the recipient of the influence. Let us discuss some important factors implicated in this process.

Cognitive Conflict

To begin with, the very fact that the target stimulus is crystal clear may produce a high degree of cognitive conflict. Some researchers have argued that it is this conflict that induces a person to conform (Ross, Bierbrauer, & Hoffman, 1976). They reason that when physical reality is undeniably clear, we anticipate complete agreement among members. Therefore, upon discovering a unanimous yet seemingly incorrect majority, naive subjects must ask themselves why everyone else in the group is making what appears to them to be a clearly incorrect choice. It is very difficult to discount completely the possibility that the majority position might actually be correct. As a result, naive subjects begin to question their own sensory experience and may, instead, turn to the majority for the "correct" judgment. Another important source of ambiguity is an expectation held by naive subjects that since there is a clear physical reality, the majority expects that there will be no disagreement among group members. This in turn makes naive subjects apprehensive about what the majority will think of them if they violate this expectation. Such apprehension can also lead to a considerable pressure to agree with the majority.

Informational and Normative Influence

Another important determinant of conformity is the *goal* of the person who confronts an erroneous majority. Researchers have distinguished two general classes of goals. The first is *being correct*. That is to say, members may want to discover the correct solution to problems presented to them in a given situation. In the Asch situation, the very fact that a unanimous majority endorses one position may suggest that the position must be correct. Individuals then give up trusting their own senses and instead conform to the majority. When social influence occurs because the member wants to be correct, the influence is said to be *informational*. The second goal is *social approval*. Members want to feel liked and approved of by others. In the service of this desire, individuals may adjust their opinions to those of others; it is a tactic that enables them to gain approval or avoid rejection (see Chapter 9 by Cialdini in this volume). When social influence is mediated by the motive for social approval, it is said to be *normative*.

There seems to be a sizable component of normative social influence in the Asch situation. This has been suggested by subsequent experiments that demonstrate that conformity decreases dramatically once naive subjects can respond anonymously (Crutchfield, 1955; Deutsch & Gerard, 1955; see Allen, 1965, for a review). Quite interestingly, however, even in these conditions where complete anonymity is assured, some small yet reliable amount of conformity still remains, suggesting that some portion of the influence is informational. Finally, it must be noted that in the Sherif study discussed above, the influence was predominantly informational. This was indicated by the fact that contrary to Asch's subjects, those in Sherif's study continued to judge the light movement in accordance with the group norm even after the group itself had been disbanded.

Majority Size: The Critical Role of Perceptual Grouping

How many individuals does a majority need to have to produce a significant amount of conformity? Will a majority produce more conformity as its size increases? These issues, in fact, were addressed in Asch's original experiment, where the number of the accomplices was varied from 1 through 16 (1, 2, 3, 4, 8, and 16). The result was quite revealing. Conformity increased quite rapidly until the majority reached the size of 3 or 4 and, thereafter, leveled off. Thus, a majority of 8 or even 16 was no more effective than a majority of 3 or 4. This finding has been replicated by several other researchers (Gerard, Wilhelmy, & Conolley, 1968; Rosenberg, 1961; Wilder, 1977). In every instance, a rather small majority had as much power over the individual as did a quite large majority.

Why this is true is not entirely clear; but we shall offer one tentative interpretation along with some evidence for it. Following Wilder (1977), we think that when there are more than three or four individuals advocating the same position, these individuals are no longer perceived as separate individuals but rather as a *clique*—we pigeonhole them to form a single category like "those guys with a different point of view." Once individuals are packaged, the package functions as a *single* unit, virtually regardless of its size, resulting in no appreciable increase in conformity as its size increases. Support for this hypothesis comes from several experiments. In one study, Wilder (1977) found that individuals are influenced more by two *independent* groups of two people than by one group of four people. Similarly, three groups of two individuals were more influential than two groups of three individuals, which in turn were more influential than one group of six individuals. In short, it is easier to discount the opinions of others when we can perceive these individuals as belonging together, as being cliqueish or nonindependent judges.

A similar point was made by Kitayama, Burnstein, and Nelson (1987) within an Asch-type conformity situation. At the beginning of their study, twelve subjects were divided into two groups of six people on an entirely arbitrary basis. Subjects were then seated in individual cubicles and exchanged their views on a variety of issues by pressing a key on a computer keyboard in front of them. In fact, on several issues, the feedback about "others' opinions" had been prearranged so that each subject had to express his or her own opinion in fifth place after four "preceding persons" had expressed their opinions, which were uniformly extreme responses. Further, these four were either from a single group or from two different groups (two from one group and the remaining two from the other group). Subjects' response tended to move more in the direction of the majority position when the majority consisted of two groups of two individuals than when it consisted of one group of four individuals.

Minority Influence

Let us return to the case of Paul, the fraternity brother who thinks that a more strict alcohol policy is desirable. What if Paul publicly and consistently argues for his position, despite the fact that virtually everybody else in the fraternity strongly opposes such a policy? Most likely, other members will try to persuade Paul to change his opinion and conform; they may even threaten to ostracize him (Schachter, 1951). Nevertheless, suppose Paul still insists on vigorously expressing his belief in tighter regulation of alcohol in their house. How would the others respond to such a consistent, active minority?

In this section, we will review research on minority influence. Let us begin by distinguishing between two general effects of a minority.

Two Effects of an Active Minority

Liberating Effect

An important role that a minority can play in social influence was suggested by Asch in his original series of experiments. In these experiments, Asch showed that the influence of a majority can be greatly diminished if it is less than unanimous. In one of the experiments, each six-person group contained not only a majority but also a minority, that is, a single accomplice who had been instructed to respond correctly throughout. The minority member was always seated in the fourth position so that he announced his judgment just prior to the naive subject. In these conditions, conformity by the subject decreased dramatically. Recall that with a unanimous (and incorrect) majority, the naive subject conformed on more than 30% of the critical trials. When a single accomplice was instructed to defect from the majority and give a correct response, the naive subjects conformed with the majority on less than 6% of the trials.

It is evident that the presence of a small minority can greatly subvert the power of the majority (see Figure 8-2). The example of dissent frees members to express the correct opinion, as they would in the absence of an incorrect majority. A minority can *liberate* individuals from a unanimous majority for two reasons. First, a minority breaks the unanimity of a majority; and second, a minority can also provide social support for a naive subject's position. Note that although these two roles of liberating minorities often go together, they are theoretically distinct. For example, imagine a case in which the minority's position is quite different from

"Your Honor, on the first ballot the jury voted ten to two for conviction. For three emotionally charged hours, we discussed our points of difference. On the next ballot, it was seven to five for acquittal. Over the next several ballots, the vote seesawed back and forth. One juror became ill and was replaced by an alternate. By now, we had been in session for ten hours straight. Tempers were rising and some jurors were near the breaking point."

FIGURE 8-2 The presence of an active minority can make group members feel free to express their own opinions.

Source: Drawing by Dana Fradon; © 1986 The New Yorker Magazine, Inc.

that of the majority, as well as that of the naive subject. In this case, the minority breaks the unanimity of the majority but does not provide any support for the naive subject's position. Interestingly, in the perceptual judgment task examined by Asch, conformity was reduced by a minority that disagreed with both the naive subject and the majority as effectively as by a minority that agreed with the naive subject, that is, who both broke the unanimity *and* provided social support (Allen & Levine, 1969). It appears, therefore, that unanimity is the primary source of the power of a majority in the Asch situation.

Belief Conversion Effect

Besides the liberating effect, a minority can have another, equally significant effect. Under certain conditions, a minority can influence majority members' private beliefs even when the minority is publicly rejected or ignored. In other words, a minority can produce *conversion* in the private beliefs of majority members without any apparent influence on what they say overtly or publicly. Evidence tends to indicate that such a conversion effect produced by a minority is mediated by psychological processes somewhat different from those underlying majority influence or conformity. Although still controversial (see e.g., Latané & Wolf, 1981; Tanford & Penrod, 1984, for alternative views), this possibility is intriguing both theoretically and empirically and, in fact, has been actively pursued by a number of researchers since it was first proposed by a French social psychologist, Serge Moscovici (e.g., Moscovici & Faucheux, 1972).

Belief Conversion in Minority Influence

Several studies have demonstrated, in a situation analogous to Asch's, that a numerical minority can influence majority members' (i.e., naive subjects') judgments even though the minority's position is incorrect. In a typical experiment of this kind, Moscovici had five individuals name the color of a blue slide (e.g., Moscovici & Faucheux, 1972). As in the Asch experiment, the correct answer was very obvious. However, two of the five members were in fact accomplices of the experimenter and had been instructed to report consistently that the color was "green." When the percent of "green" responses made by the naive majority subjects was examined, they were found to occur on about 10% of the trials, thus demonstrating reliable minority influence. Interestingly, however, the minority influence completely vanished when the minority was not consistent, that is, when they made correct "blue" responses on some trials and incorrect "green" responses on the others. Based on findings such as these, Moscovici has suggested that *behavioral consistency* is a necessary condition for a minority to exert influence on a majority (see also Nemeth, Swedlund, & Kanki, 1974; Nemeth & Wachtler, 1974).

Why Consistency?

Earlier in this chapter, we suggested two sources of majority influence. First, informational influence occurs because the very fact that a large number of individuals agree on an issue suggests that this view must be correct. Second, normative influence takes place because individuals often want to be liked or accepted by the rest of the group, namely, the majority. Neither of these processes are likely when the source of influence is a numeric minority. Indeed, the fact that very few other people constitute the minority suggests that its position is likely to be *incorrect*. Further, individuals would presumably wish to be liked by more, rather than fewer, members, that is, by a majority of their group instead of a minority.

Moscovici (e.g., Moscovici & Faucheux, 1972) has proposed that, even under these circumstances, minorities can still exert an important influence on majorities but only if they are consistent in their behavioral style. If a minority consistently insists on its position, a majority will not be able to ignore the minority even though they still believe that the minority's position is incorrect. Also, members assume that a minority status is disadvantageous and that there is little incentive for the minority to insist on its position unless the minority sincerely believes that position. The inevitable inference, then, is that the minority members must be really and truly convinced that their position is correct (Kelley, 1973). As a consequence, the majority members will begin to think about possible perspectives and potential arguments that may cause the minority to believe so strongly in their position.

To illustrate, let us examine Paul's case again. In their attempt to make sense of Paul's deviant behavior, the other members of the fraternity (i.e., the majority) may begin generating arguments that would explain Paul's (the minority's) position. Naturally, these self-generated arguments would on the whole support his position. As a consequence, the members will start to see some reasonable points to what Paul has been saying, which they had not thought about before. Their private opinions may then gradually change. In short, minority influence is likely to be mediated by issue-relevant thoughts activated in members of the majority by the consistent, deviant behavior of a minority, and it is likely to induce private change of opinion. (See Chapter 6 by Petty et al. for a discussion of the persuasive effects of self-generated thoughts.)

Minority Influence versus Majority Influence

Moscovici (e.g., Moscovici & Faucheux, 1972) has argued that the cognitive processes involved in generating arguments to explain a deviant position occur primarily when the deviant is a minority in the group and that these processes are unlikely when a deviant position is taken by a majority (see Maass & Clark, 1984; Nemeth, 1986, for reviews). In the case of majority influence, several factors work in concert to reduce the likelihood that members will engage in issue-relevant thinking. First, a member may decide to conform publicly to the majority without thinking seriously or deeply about arguments explaining what may have caused the majority to take the position they did. As we noted earlier, conformity is often a tactic to gain approval from a majority (i.e., normative influence). If the concern for approval dominates one's decision to go along with others, then very few issue-relevant thoughts are likely to be generated. Further, belonging to the majority has some obvious advantages, such as higher status and power within the group. Recognition of these facts by naive individuals makes them uncertain whether the majority members hold to their position because they really believe it or because they benefit from belonging to the majority. We are much less likely to think that a member belongs to a minority because of the benefits this status confers. Thus, the credibility of the majority is more likely to be in doubt than that of a minority. All in all, then, when faced with a deviant position, individuals attend to the issue and attempt to understand the deviant perspective only if those holding this perspective constitute a minority, not a majority.

Support for this analysis comes from a recent experiment by Atsumi and Burnstein (1991). They examined whether the judgmental accuracy of a naive member is influenced more by an inaccurate majority or an inaccurate minority. Subjects in the experiment participated in groups of six. Each subject was seated in front of a computer screen, on which a 10 × 10 matrix was displayed. Some of the 100 slots in the matrix were filled with circles, and the remaining were not filled. Subjects' task was to judge whether and to what extent the filled slots exceeded 50% of the total slots. Atsumi and Burnstein reasoned that the accuracy in this judgment should increase when individuals pay more attention to the stimulus pattern, whereas it should decrease if they pay less attention. Each participant observed the responses allegedly made by the other members *before* the participant made his or her own judgment. In fact, this information about the others' judgments had been rigged so that on some trials, all five of the others' judgments were incorrect (majority condition), whereas on some trials, only two of them were incorrect (minority condition).

These researchers found that the accuracy of judgments increased in the minority condition but decreased in the majority condition. Their result clearly supports the hypothesis that members should pay more attention to the issue in question when a deviant position is taken by a minority than when the identical position is taken by a majority. Notice also that this experiment suggests a little dissent in a group is beneficial. It induces more critical evaluation of the issue and, as a consequence, makes for a more accurate group decision.

Additional and interesting support for the hypothesis that individuals attempt to understand a minority position rather than a majority position comes from a study by Maass and Clark (1983). In a group discussion about gay rights, individuals were more likely to agree with a majority position when their opinions had to be expressed in public than when they had to be expressed in private, but they were more likely to agree with a minority position when their opinions could be expressed in private rather than in public (see also Nemeth & Wachtler, 1974; Maass & Clark, 1984; Nemeth, 1986, for reviews). Thus, majority influence results mostly in public compliance without private acceptance. Minority influence, however, can lead to private acceptance in the absence of any noticeable influence in public.

The Active Minority and Social Change

All in all, there is considerable evidence that minorities can influence majorities by inducing issue-relevant thought congruent with the minority position. Having said this, however, we hasten to point out that it still is fairly rare that minorities have substantial impacts on majorities in everyday life. For example, Kalven and Zeisel (1966; cited in Nemeth, 1986, p. 23) analyzed 225 juries and found that the majority position on the first ballot became the final verdict in over 85% of the cases.

Perhaps this should not come as any surprise. After all, there are many hurdles to be cleared before minorities can produce significant change in both the private beliefs and the public behaviors of majorities. To begin with, it may take considerable time for minority members to make majority members *notice* as well as think about their deviant position. And supposing that the minority is successful in getting the majority to examine its position, this in no way guarantees that the majority will come up with cogent arguments that support the minority position.

Even in the best of circumstances, when the majority members do come up with relevant arguments in favor of the minority position, there still exists another major hurdle. The minority will have to overcome *pluralistic ignorance*.

Imagine that you are a member of the fraternity where Paul and his brothers are discussing their alcohol policy. Further, suppose that you have been convinced by Paul, in private, that it is necessary to have a more strict alcohol policy. Even if you are so convinced, you may not express your opinion because you *think* that other fraternity members are still opposed to such a position. Now, what if the other members, one by one, have also been persuaded by Paul so that virtually everyone in the group agrees with Paul in private? Will anything happen? Maybe not—for everyone believes that everyone else is still opposed to a strict alcohol policy. When, as in this case, people behave in the same way based on a wrong yet widely shared belief, the phenomenon is called *pluralistic ignorance.* If everybody publicly maintains their old position, breaking the consensus can be quite difficult even when all of them have been privately converted to a minority position.

Group Discussion

So far, we have discussed majority influence and minority influence separately. In real life, of course, these two forms of influence are mutual and simultaneous. Indeed, group discussion, the typical medium of influence in groups, has certain characteristics that cannot be fully captured when the interaction is divided into majority influence and minority influence. We will now turn to these more dynamic characteristics of group discussion (see Figure 8-3).

Group-Induced Opinion Shift

The Risky Shift

Imagine a college senior who is very eager to pursue graduate study in chemistry leading to the Doctor of Philosophy degree. He has been accepted by both University X and University Y. University X has a worldwide reputation for excellence in chemistry. While a degree from University X would signify outstanding training in this field, the standards are so rigorous that only a fraction of the degree candidates actually receive the degree. University Y, on the other hand, has much less of a reputation in chemistry, but almost everyone admitted is awarded the Doctor of Philosophy degree, though the degree has much less prestige than the corresponding degree from University X.

In many everyday situations, an attractive course of action often entails greater risk than a less attractive course of action. Thus, a dilemma arises: Should we take a chance and go for it, or should we be more cautious? These dilemmas can be highly dramatic, as when the president of a nation and his or her advisers formulate their policies in international and domestic crises; or more mundane but still important, as when corporate managers evaluate the pros and cons of their investment plans. Having a group discussion in these circumstances may make perfect sense, especially when the stakes involved are very high.

Because group decisions require consensus and compromise, one might expect them to be more conservative, prudent, and cautious than individual decisions. In 1961, however, Stoner reported an effect that challenged this naive belief. He dis-

"I understand Mr. Gunderson has an idea he'd like to toss in the hopper."

FIGURE 8-3 Intimidation in group discussion

Source: Drawing by Saxon; © 1986 The New Yorker Magazine, Inc.

covered that individual opinions become *riskier* after group discussion. In the next 20 years or so, there was an explosion of studies that tried to understand this phenomenon.

Group Polarization

Once researchers began studying the *risky shift*, it gradually became clear, somewhat ironically, that *risky* was a sort of misnomer. Their findings indicated that group discussion sometimes does produce more cautious decisions than those made by individuals prior to discussion. From a number of subsequent studies, a fairly simple rule of thumb emerged in predicting which shift would occur in group discussion: Discussion leads members to make more extreme decisions in the direction toward which they were initially inclined. For example, if, on the whole, members favor a risky course in private prior to discussion, they will choose an even riskier option after discussion; however, if, on the whole, they initially favor a cautious course, discussion will lead them to become even more cautious. Thus, the initial risky shift effect was a special case of a more general effect of group discussion, namely, that discussion produces opinions that are more extreme than those held by the members before they entered into the discussion.

Furthermore, some researchers have demonstrated an analogous shift of opinions through group discussion with a wide variety of topics unrelated to risk. Moscovici and Zavalloni (1969), for example, found that French university students who initially disapproved of U.S. foreign policy or who initially admired the policies of General DeGaulle evidenced even greater disapproval or admiration, respectively, after group discussion of these issues (see Doise, 1969, as well as reviews by Isenberg, 1986, and Myers & Lamm, 1976). Again, the rule of thumb is that group discussion induces more extreme opinions or beliefs. In other words, group discussion typically *polarizes* individuals' positions. These findings, as a whole, now constitute the phenomenon referred to as *group polarization*.

Theories of Group Polarization

How can group polarization be explained? A number of possibilities have been examined in the past 30 years. Here we will focus on the two that have received the most research attention: social comparison theory and persuasive argument theory. There are some close connections between these theories and some of the theoretical ideas we examined earlier in this chapter. On the one hand, we have social comparison theory, which assumes that individuals shift their opinions so as to gain approval or to be accepted by other group members. This theory therefore says, basically, that group polarization is due to *normative* influence. On the other hand, persuasive argument theory holds that group polarization is a necessary consequence of the argumentation that occurs in group discussion. This theory therefore emphasizes the role of issue-relevant thinking and views group polarization as due to *informational* influence.

Social Comparison

How can a concern about social approval lead to polarization? The earliest answer appeared in an analysis by Roger Brown (1965). He assumed that relatively extreme opinions are socially approved and that people who present themselves in this fashion are liked. Which extreme happens to be the socially approved one depends on what the values actually are. Brown argued that, at least in Western culture, a greater value seems to be placed on riskiness in such domains as games, careers, and business, whereas in such domains as health, family, and loved ones, prudence is more valued. According to this theory, members constantly compare their own positions with the positions of others in the group and strive to present themselves as at least as extreme as the others—so comes the name, *social comparison* (see also Mackie, 1986, for another more recent version of normative influence in group polarization).

One seemingly straightforward implication of social comparison theory is that group polarization should occur even when one only knows other members' choices. No discussion should be necessary. This in fact turns out to be the case (Sanders & Baron, 1977; Goethals & Zanna, 1979). However, the amount of polarization under these conditions is substantially smaller than in more naturalistic conditions in which actual discussion takes place. Thus, it is unlikely that social comparison is the only mechanism underlying group polarization.

Persuasive Argument

The other important theory of group polarization assumes that it is issue-relevant thoughts exchanged during discussion that lead to opinion polarization (Burnstein, 1982; Burnstein & Vinokur, 1977). According to the theory, on any given issue, there is a pool of arguments available in the culture, some of which favor one position and others of which favor the alternative position. These arguments, however, are not always shared; any given person usually thinks of only some of these arguments. Through group discussion, initially unshared arguments are exchanged and become widely available. And it is these arguments that are newly gained in discussion that lead to polarization.

This theory explains why group discussion polarizes opinions in a popular direction—one that most members were leaning toward prior to discussion. Such a position is popular precisely because, within the culture, arguments that favor that position are more numerous and more persuasive than those that favor the alternative position (Vinokur & Burnstein, 1974, 1978; see also Myers & Lamm, 1976). In discussion, members are likely to discover more and better reasons for having made the choices they did and, hence, polarize their positions.

Groupthink

Late in the Eisenhower administration the CIA concocted a plan to send 1,400 trained exiles into Cuba to overthrow Fidel Castro. When the Kennedy administration took over, the plan was presented to the president and his advisers. Some of the latter individuals had deep misgiving about the plan. They knew, however, that Kennedy wanted an operation of this kind. As a result, when as a group they decided to go ahead with the CIA plan, none of them gave voice to their misgivings. It turned out to be a fiasco. Afterward they lamented: "How could we have been so stupid?"

The research we have reviewed thus far is based mostly on laboratory experiments. One might ask, therefore, whether the phenomena and theoretical principles identified in this work have any relevance to more naturalistic groups. In his seminal work on group decision making, Janis (1971) showed that a number of psychological factors, including those we have discussed, can have some very powerful consequences in the real world. Specifically, these factors conspire to create a phenomenon called *groupthink*, which causes defective group decisions. In this section, we will discuss some pitfalls of group discussion that have made history, such as the ones exemplified by the Kennedy administration's infamous decision to invade Cuba in 1961, and suggest possible ways of avoiding these pitfalls.

Groupthink occurs when members of a cohesive group have a strong desire to achieve and maintain consensus and unity. This tendency toward concurrence seeking overrides the group's realistic appraisals of their alternatives. As a result, the group decision has a good chance of being defective. When the members' need to agree becomes excessive, they tend to generate arguments that allow the group as a whole to rationalize their preexisting positions. Dissent is not welcome. The members become extremely reluctant to communicate disagreements with what they perceive to be the established consensus. This reluctance to openly disagree, deriving from each individual's desire to secure social approval, leads to an illusory confidence in the group decision and to the unwarranted belief that the decision is universally accepted, that it has the status of a group norm, and that, as such, it is inviolable. In groupthink, the group itself becomes sacrosanct. In Janis's own words, there arise both an "unquestioned belief in the group's morality" and an "illusion of unanimity" so that the issues raised and the arguments made tend to be detached from the outside realities.

Janis demonstrated that the tendency toward groupthink can be seen in well-known policy decisions made by the nation's highest officials. He analyzed and compared several good and bad policy decisions made by U.S. presidents and their advisers. Drawing on historical documents, Janis concluded that the tendency toward groupthink has been the cause of numerous blunders in several administrations. As mentioned earlier, one well-known instance occurred during the Kennedy administration when the president and his advisers blindly adopted a jerry-rigged plan to invade Cuba. Janis observed virtually every symptom of groupthink among cabinet members of the Kennedy administration during their discussion of the invasion plan. For example, one cabinet member at that time, Arthur Schlesinger (1965), frankly admitted at a later date that "I can only explain my failure to do more than raise a few timid questions by reporting that one's impulse to blow the whistle on this nonsense was *simply undone by the circumstances of the discussion*" (p. 255; emphasis added). According to Janis, Schlesinger greatly valued his membership in this very powerful and prestigious group and imposed *self-censorship* in order not only to maintain consensus in the group but also, in the long run, to avoid rejection by other cabinet members as well as by the president himself.

A later instance of groupthink can be found in the decision to escalate the Vietnam War, taken in a series of meetings from 1965 to 1970 by the Johnson administration. In his recent memoirs, Clark Clifford, a private adviser to President Johnson during the escalation in Vietnam, recounted that, on one occasion, when he tried to raise doubts about the president's decision to renew bombing, the secretary of state, Dean Rusk, quickly interrupted and "immediately shifted the discussion to other matters" (Clifford, 1991, p. 63). Rusk, in this example, volunteered to protect the president from potential dissent. Janis called such an individual a *mind guard*. A mind guard protects a leader from a potential threat to his positions, arguments, and beliefs, just as a body guard protects him from a physical assault.

The self-restraint exercised by Schlesinger and the mind-guard role assumed by Rusk are subtle yet extremely powerful means to secure group consensus. At the same time, these behaviors reduce the likelihood that external reality is appraised in a balanced and comprehensive fashion. Thus, they are a precursor of defective group decisions.

Remedies for Groupthink

What can prevent groups from falling prey to groupthink? Janis has suggested several possibilities. First, it is important to bring in outside experts who have no vested interest in the group in order to present a broad range of ideas and to have members of the group debate alternative positions with the outsiders. Second, the leader must establish a norm that encourages the critical examination of all possible courses of action. Third, the leader must remain impartial and avoid publicly stating his or her view during discussion.

To this list, we may add a few more. Hierarchical structure is a fact of life. In real groups, differences in power are salient to members. This leads inevitably to a heightened need for social approval and acceptance among subordinates. Because the need for approval and the desire for acceptance are major conditions for groupthink, procedures that make hierarchy and social approval less salient should reduce the likelihood of groupthink. To begin with, it is important for leaders not to make their approval contingent on remarks made by other members in discussion. Instead, leaders have to make it clear that the members have their support and trust *regardless of the position taken by them*. In order to demonstrate that support and trust are nonconditional, the leader must give evidence of it to subordinates, not only in task settings but also in more informal, nonwork domains. In this way, a concern for social approval may cease to be a major source of bias when critical decisions are made. A further possibility, noted by Janis, as well, is to form subgroups or subcommittees that have no formal leader in order to discuss critical issues before they are raised as formal matters in the larger group. In nonhierarchical subgroups of this kind, social approval is likely to be only a minor concern. All of this is in the service of unbiased and thorough argumentation in the group, without which the possibility of groupthink always looms.

Summary

In this chapter, we have reviewed a few lines of research that are fundamental to our understanding of persuasive processes in groups. A major distinction is made between persuasion produced by a majority and that produced by a minority. It was shown that different theoretical terms are required to describe these two forms of social influence. In a nutshell, majority influence generally results in public compliance without necessarily producing private acceptance. Minority influence, however, usually entails private acceptance without necessarily producing any public sign of acceptance. Finally, factors relevant in our understanding of majority and minority influence are also closely implicated in more naturalistic group discussions; they operate in concert to produce such intriguing phenomena as group polarization and groupthink.

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Chapter 12:
Individual and Group Decision Making

Why Does Google Rely on Group Decision Making at the Top of the Organization?

A group of Google executives meets every Monday afternoon in the corporate boardroom. "The weekly meeting, known as Execute, was launched last summer with a specific mission: to get the near-sovereign leaders of Google's far-flung product groups into a single room and harmonize their disparate initiatives." Google's co-founders Sergy Brin and Larry Page, who recently took over as CEO, and former CEO Eric Schmidt run the meetings. Attendees at the meeting include Andy Rubin, engineering VP for Android, Salar Kamangar, VP for Youtube, and Vic Gundotra, engineering VP for social networks. Page told a reporter from *Bloomberg Businessweek* that the goal of these meetings is "to get these different product leaders together to find time to talk through all the integration points. . . . Every time we increase the size of the company, we need to keep things going to make sure we keep our speed, pace, and passion."

Over the years, the decision-making process at Google led to a host of innovative products such as Gmail and Android, not to mention the company's heralded search engine. Unfortunately, the company has recently encountered several failed offerings, including Google Buzz, which is a Twitter clone, and Google Wave, a service that allows people to collaborate online.

"Page doesn't explicitly blame those missteps on the company's loosely knit management or the famous troika at the top. Yet he concedes, 'We do pay a price [for shared decision making], in terms of speed and people not necessarily knowing where they go to ask questions.' Page believes that his appointment as CEO will help the company to get things done faster.

People outside and inside Google note that Larry Page does not fit the profile of a traditional chief executive. He's an introvert who does not like public speaking or having a strict daily regimen. This is one reason why Google is holding the weekly Execute meetings. Attendees at these meetings will become spokespeople for the organization around the world. "Page says one of his goals is to take the decisive leadership style they have shown within their product groups, spread it across the company, and apply it to major decisions."

Page wants to increase the speed with which people make decisions and innovate at Google. He believes that the weekly Execute meetings are prime vehicles for making this happen.[1]

Time will tell whether or not Google's approach to decision making works in the long run. Individually, we all make decisions on a daily basis. From deciding what clothes to wear to whom we want to marry, our decisions impact our lives in many ways. Sometimes our choices are good and other times they are bad. At work, however, decision making is one of the primary responsibilities of being a manager, and the quality of one's decisions can have serious consequences. Consider the case of Ronald Shaich, chairman and CEO of Panera Bread Company. Despite objections from others around him, he relied on his own judgment and intuition and decided to sell off Au Bon Pain in 1998 in order to grow Panera Bread Company. At the time, Panera had 135 stores. He said it was a "bet-the-job kind of choice." The sale resulted in $73 million to invest in Panera, and the rest is history. Panera now operates 1,500 cafés around the country. He told a *Bloomberg Businessweek* reporter that "I make my best decisions when I'm on vacation. You're not focused on all the stuff that comes at you as CEO. I've moved into a chairman role and I'm now more productive than ever. My decisions are formed by where I want to go."[2]

The overall goal of this chapter is to provide you with a thorough understanding of decision making so that you can improve the quality of your personal and group-based decisions. Who knows, you may one day use material in this chapter to help make entrepreneurial decisions like Larry Page and Ronald Shaich. To help in this pursuit, this chapter focuses on (1) models of decision making, (2) decision-making biases, (3) evidence-based decision making, (4) the dynamics of decision making, (4) group decision making, and (5) creativity.

TO THE POINT

What are the key differences between rational and nonrational models of decision making and how can these models be integrated?

LO.1 Models of Decision Making

Decision making entails identifying and choosing alternative solutions that lead to a desired state of affairs. For example, you may be reading this book as part of an online course that you decided to take because you are working full time. Alternatively, you may be a full-time student reading this book as part of a course being taken on campus. Identifying and sorting out alternatives like when and how to take a course is the process of decision making.

You can use two broad approaches to make decisions. You can follow a *rational model* or various *nonrational models*. Let us now consider how each of these approaches works. We begin by examining the rational model of decision making.

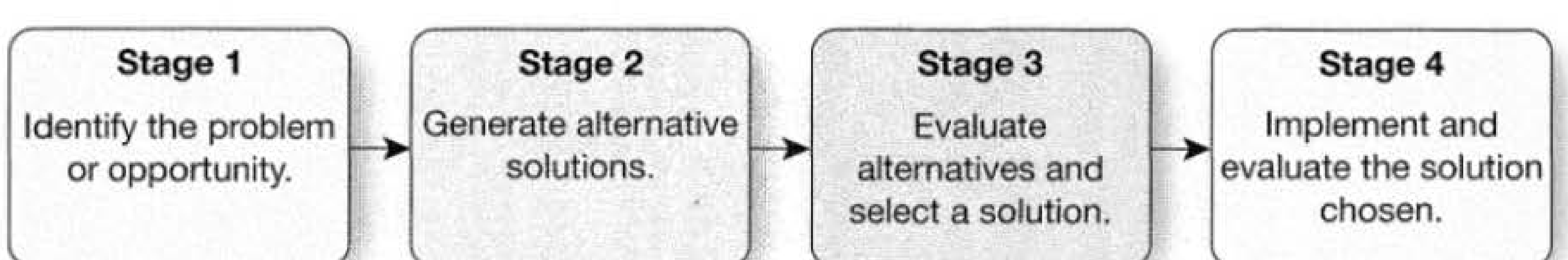
The Rational Model

The **rational model** proposes that managers use a rational, four-stage sequence when making decisions (see Figure 12–1). According to this model, managers are completely objective and possess complete information to make a decision. Despite criticism for being unrealistic, the rational model is instructive because it analytically breaks down the decision-making process and serves as a conceptual anchor for newer models.[3] Let us now consider each of these four steps.

Stage 1: Identify the Problem or Opportunity—Determining the Actual versus the Desirable

A **problem** exists when the actual situation and the desired situation differ. As a manager, you will have no shortage of

figure 12–1 The Four Stages in Rational Decision Making



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Reed Hastings Seizes Opportunities to Grow Netflix

Hastings anticipated, virtually from the moment he started Netflix, that consumers would eventually prefer to get movies instantly delivered via the Internet. (Hastings's foresight is amazing, considering that back in 2000, less than 7% of US homes had broadband.) And so rather than let any number of current and potential competitors—including premium cable channels like HBO . . . and some of the biggest companies in the tech world—swoop in and deliver a lethal blow, Hastings is now retooling Netflix as a streaming-video company, disrupting his own business before it gets disrupted.

For Hastings the decline of AOL is a reminder of what happens to companies unwilling to take risks. AOL, the dominant dial-up online service, struggled as broadband service proliferated. It had good e-mail and some unique content, but those services didn't buy AOL loyalty or make it synonymous with broadband, and ultimately AOL lost customers.

The opportunity faced by Hastings involved deciding how to get Netflix's 10 million subscribers to switch from DVD to streaming. Hastings decided in 2011 to separate its DVD-by-mail business from the online movie streaming business. The move angered customers and the stock price significantly dropped.

To what extent do you think an individual's personality plays a part in perceiving opportunity?

SOURCE: Excerpted from M V Copeland, "Reed Hastings: Leader of the Pack," *Fortune*, December 6, 2010, p 123; Updated with "Netflix Separates DVD, Streaming Businesses," Florida Today.com, http://www.floridatoday.com/article/20110920/BUSINESS/109200306/1003, September 20, 2011.

problems. Customer complaints. Employee turnover. Competitors' new products. Production problems. Consider the problems faced by Mattel's CEO, Bob Eckert. He concluded that his company had a problem when two of his top managers arrived in his office to tell him lead had been discovered in one of the company's toys. Around the same time, newspapers were publishing reports that magnets were becoming dislodged from other Mattel toys: If a small child swallowed them, they could cause serious damage by attaching themselves together in the child's intestines. Eckert had to decide whether his company had a publicity problem, a design problem, or a production problem—and if it were a production problem, where that problem was occurring and why.[4]

However, managers also have to make decisions regarding opportunities. An **opportunity** represents a situation in which there are possibilities to do things that lead to results that exceed goals and expectations. For example, Reed Hastings, founder, chairman, and CEO of Netflix, saw great opportunities in transforming his DVD-by-mail company into a streaming-video company (see Real World/Real People above). Financial results suggest that Reed clearly capitalized on opportunity: Netflix was the stock of the year in 2010, increasing 200% since January, as compared to the S&P 500's 7% gain.[5]

Whether you face a problem or an opportunity, the goal is always the same: to make improvements that change conditions from their current state to more desirable ones. This requires you to diagnose the causes of the problem.

decision making Identifying and choosing solutions that lead to a desired end result.

rational model Logical four-step approach to decision making.

problem Gap between an actual and a desired situation.

opportunity Situations that present possibilities for exceeding goals or expectations.

Stage 2: Generate Alternative Solutions—Both the Obvious and the Creative After identifying a problem and its causes, the next logical step is generating alternative solutions. Later in this chapter we discuss several group problem-solving techniques that can be used during this stage. Unfortunately, a research study of 400 strategic decisions revealed that managers struggled during this stage because of three key decision-making blunders. These blunders were (1) rushing to judgment, (2) selecting readily available ideas or solutions, and (3) making poor allocation of resources to study alternative solutions. Decision makers thus are encouraged to slow down when making decisions, to evaluate a broader set of alternatives, and to invest in studying a greater number of potential solutions.[6]

Stage 3: Evaluate Alternatives and Select a Solution—Ethics, Feasibility, and Effectiveness In this stage, you need to evaluate alternatives in terms of several criteria. Not only are costs and quality important, but you should consider the following questions: (1) Is it ethical? (If not, don't consider it.) Returning to the earlier example of Mattel's problems, CEO Eckert said, "How you achieve success is just as important as success itself."[7] He announced a recall of 18.2 million toys, the largest recall in Mattel's history. The company also announced that its magnet toys had been redesigned to make them safer and that it had investigated the Chinese contractor that had used the paint containing lead. (2) Is it feasible? (If time is an issue, costs are high, resources are limited, technology is needed, or customers are resistant, for instance, than the alternative is not feasible.) (3) Will it remove the causes and solve the problem?

Stage 4: Implement and Evaluate the Solution Chosen Once a solution is chosen, it needs to be implemented. After the solution is implemented, the evaluation phase assesses its effectiveness. If the solution is effective, it should reduce the difference between the actual and desired states that created the problem. If the gap is not closed, the implementation was not successful, and one of the following is true: Either the problem was incorrectly identified or the solution was inappropriate. Assuming the implementation was unsuccessful, management can return to the first step, problem identification. If the problem was correctly identified, management should consider implementing one of the previously identified, but untried, solutions. This process can continue until all feasible solutions have been tried or the problem has changed.

Summarizing the Rational Model The rational model is prescriptive, outlining a logical process that managers should use when making decisions. As such, the rational model is based on the notion that managers optimize when making decisions. **Optimizing** involves solving problems by producing the best possible solution and is based on a set of highly desirable assumptions—having complete information, leaving emotions out of the decision-making process, honestly and accurately evaluating all alternatives, time and resources are abundant and accessible, and people are willing to implement and support decisions. Practical experience, of course, tells us that these assumptions are unrealistic. As noted by Herbert Simon, a decision theorist who in 1978 earned the Nobel Prize for his work on decision making, "The assumptions of perfect rationality are contrary to fact. It is not a question of approximation; they do not even remotely describe the processes that human beings use for making decisions in complex situations."[8]

That said, there are three benefits of trying to follow a rational process as much as realistically possible.

- The quality of decisions may be enhanced, in the sense that they follow more logically from all available knowledge and expertise.
- It makes the reasoning behind a decision transparent and available to scrutiny.
- If made public, it discourages the decider from acting on suspect considerations (such as personal advancement or avoiding bureaucratic embarrassment).[9]

Nonrational Models of Decision Making

In contrast to the rational model's focus on how decisions should be made, **nonrational models** attempt to explain how decisions actually are made. They are based on the assumption that decision making is uncertain, that decision makers do not possess complete information, and that it is difficult for managers to make optimal decisions. Two nonrational models are Herbert Simon's *normative* model and the *garbage can model.*

Simon's Normative Model Herbert Simon proposed this model to describe the process that managers actually use when making decisions. The process is guided by a decision maker's bounded rationality. **Bounded rationality** represents the notion that decision makers are "bounded" or restricted by a variety of constraints when making decisions. These constraints include any personal characteristics or internal and external resources that reduce rational decision making. Personal characteristics include the limited capacity of the human mind, personality (a meta-analysis of 150 studies showed that males displayed more risk taking than females),[10] and time constraints. Examples of internal resources are the organization's human and social capital, financial resources, technology, plant and equipment, and internal processes and systems. External resources include things the organization cannot directly control such as employment levels in the community, capital availability, and government policies.[11]

Ultimately, these limitations result in the tendency to acquire manageable rather than optimal amounts of information. In turn, this practice makes it difficult for managers to identify all possible alternative solutions. In the long run, the constraints of bounded rationality cause decision makers to fail to evaluate all potential alternatives, thereby causing them to satisfice.

Satisficing consists of choosing a solution that meets some minimum qualifications, one that is "good enough." Satisficing resolves problems by producing solutions that are satisfactory, as opposed to optimal. Finding a radio station to listen to in your car is a good example of satisficing. You cannot optimize because it is impossible to listen to all stations at the same time. You thus stop searching for a station when you find one playing a song you like or do not mind hearing.

A recent national survey by the Business Performance Management Forum underscores the existence of satisficing: only 26% of respondents indicated that their companies had formal, well-understood decision-making processes. Respondents noted that the most frequent causes of poor decision making included:

- Poorly defined processes and practices.
- Unclear company vision, mission, and goals.
- Unwillingness of leaders to take responsibility.
- A lack of reliable, timely information.[12]

The Garbage Can Model As is true of Simon's normative model, this approach grew from the rational model's inability to explain how decisions are actually made. It assumes that organizational decision making is a sloppy and haphazard process. This contrasts sharply with the rational model, which proposed that decision makers follow a sequential series of steps beginning with a problem and ending with a solution. According to the **garbage can model**, decisions result

optimizing Choosing the best possible solution.

nonrational models Explain how decisions actually are made.

bounded rationality Constraints that restrict rational decision making.

satisficing Choosing a solution that meets a minimum standard of acceptance.

garbage can model Holds that decision making is sloppy and haphazard.

from a complex interaction between four independent streams of events: problems, solutions, participants, and choice opportunities.[13] The interaction of these events creates "a collection of choices looking for problems, issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they might be the answer, and decision makers looking for work."[14] A similar type of process occurs in your kitchen garbage basket. We randomly discard our trash and it gets mashed together based on chance interactions. Consider, for instance, going to your kitchen trash container and noticing that the used coffee grounds are stuck to a banana peel. Can you explain how this might occur? The answer is simple: because they both got thrown in around the same time. Just like the process of mixing garbage in a trash container, the garbage can model of decision making assumes that decision making does not follow an orderly series of steps. Rather, attractive solutions can get matched up with whatever handy problems exist at a given point in time or people get assigned to projects because their workload is low at that moment. This model of decision making thus attempts to explain how problems, solutions, participants, and choice opportunities interact and lead to a decision.

The garbage can model has four practical implications. First, this model of decision making is more pronounced in industries that rely on science-based innovations such as pharmaceutical companies.[15] Managers in these industries thus need to be more alert for the potential of haphazard decision making. Second, many decisions are made by oversight or by the presence of a salient opportunity. For example, managers from the Campbell Soup Company needed to find a way to motivate supermarkets to give them more space on the shelves. They thus decided to create a new shelving system that automatically slides soup cans to the front when a shopper picks up a can. The decision was a success. Customers bought more soup, increasing the revenue for both Campbell and the supermarkets, and the supermarkets reduced their restocking costs.[16]

Third, political motives frequently guide the process by which participants make decisions. It thus is important for you to consider the political ramifications of your decisions. Organizational politics are discussed in Chapter 15. Finally, important problems are more likely to be solved than unimportant ones because they are more salient to organizational participants.[17]

Integrating Rational and Nonrational Models

Applying the idea that decisions are shaped by characteristics of problems and decision makers, consultants David Snowden and Mary Boone have come up with their own approach that is not as haphazard as the garbage can model but acknowledges the challenges facing today's organizations. They essentially integrate rational and nonrational models by identifying four kinds of decision environments and an effective method of decision making for each.[18]

1. A simple context is stable, and clear cause-and-effect relationships can be discerned, so the best answer can be agreed on. This context calls for the rational model, where the decision maker gathers information, categorizes it, and responds in an established way.
2. In a complicated context, there is a clear relationship between cause and effect, but some people may not see it, and more than one solution may be effective. Here, too, the rational model applies, but it requires the investigation of options, along with analysis of them.
3. In a complex context, there is one right answer, but there are so many unknowns that decision makers don't understand cause-and-effect relationships. Decision makers therefore need to start out by experimenting, testing options, and probing to see what might happen as they look for a creative solution.

4. In a chaotic context, cause-and-effect relationships are changing so fast that no pattern emerges. In this context, decision makers have to act first to establish order and then find areas where it is possible to identify patterns so that aspects of the problem can be managed. The use of intuition and evidence-based decision making, both of which are discussed later in this chapter, may be helpful in this situation.[19]

Back to the Chapter-Opening Case

How does Google's Execute meetings attempt to integrate rational and nonrational models of decision making?

LO.2 Decision-Making Biases

TO THE POINT

How would you describe the eight decision-making biases?

People make a variety of systematic mistakes when making decisions. These mistakes are generally associated with a host of biases that occur when we use judgmental heuristics. **Judgmental heuristics** represent rules of thumb or shortcuts that people use to reduce information-processing demands.[20] We automatically use them without conscious awareness. The use of heuristics helps decision makers to reduce the uncertainty inherent within the decision-making process. Because these shortcuts represent knowledge gained from past experience, they can help decision makers evaluate current problems. But they also can lead to systematic errors that erode the quality of decisions, particularly for people facing time constraints such as primary health care doctors. For example, a recent study of medical malpractice claims showed that diagnostic errors, which are partly a function of judgmental heuristics, accounted for about 40% of such cases. Diagnostic errors kill 40,000 to 80,000 people a year in the United States. Experts suggest that we need to become more involved with our health care and follow up on lab results to help reduce such mistakes.[21]

There are both pros and cons to the use of heuristics. In this section we focus on discussing eight biases that affect decision making: (1) availability, (2) representativeness, (3) confirmation, (4) anchoring, (5) overconfidence, (6) hindsight, (7) framing, and (8) escalation of commitment. Knowledge about these biases can help you to avoid using them in the wrong situation.

1. **Availability heuristic.** The availability heuristic represents a decision maker's tendency to base decisions on information that is readily available in memory. Information is more accessible in memory when it involves an event that recently occurred, when it is salient (e.g., a plane crash), and when it evokes strong emotions (e.g., a high-school student shooting other students). This heuristic is likely to cause people to overestimate the occurrence of unlikely events such as a plane crash or a high-school shooting. This bias also is partially responsible for the recency effect discussed in Chapter 7. For example, a manager is more likely to give an employee a positive performance evaluation if the employee exhibited excellent performance over the last few months.

judgmental heuristics Rules of thumb or shortcuts that people use to reduce information-processing demands.

2. **Representativeness heuristic.** The representativeness heuristic is used when people estimate the probability of an event occurring. It reflects the tendency to assess the likelihood of an event occurring based on one's impressions about similar occurrences. A manager, for example, may hire a graduate from a particular university because the past three people hired from this university turned out to be good performers. In this case, the "school attended" criterion is used to facilitate complex information processing associated with employment interviews. Unfortunately, this shortcut can result in a biased decision. Similarly, an individual may believe that he or she can master a new software package in a short period of time because a different type of software was easy to learn. This estimate may or may not be accurate. For example, it may take the individual a much longer period of time to learn the new software because it involves learning a new programming language.
3. **Confirmation bias.** The confirmation bias has two components. The first is to subconsciously decide something before investigating why it is the right decision, for example, deciding to purchase a particular type of PDA (personal digital assistant). This directly leads to the second component, which is to seek information that supports purchasing this PDA while discounting information that does not.
4. **Anchoring bias.** How would you answer the following two questions? Is the population of Iraq greater than 40 million? What's your best guess about the population of Iraq? Was your answer to the second question influenced by the number *40 million* suggested by the first question? If yes, you were affected by the anchoring bias. The anchoring bias occurs when decision makers are influenced by the first information received about a decision, even if it is irrelevant. This bias happens because initial information, impressions, data, feedback, or stereotypes anchor our subsequent judgments and decisions.
5. **Overconfidence bias.** The overconfidence bias relates to our tendency to be over-confident about estimates or forecasts. This bias is particularly strong when you are asked moderate to extremely difficult questions rather than easy ones. Imagine the problem this bias might create for a sales manager estimating sales revenue for the next year. Research shows that overoptimism significantly influences entrepreneurs' decisions to start and sustain new ventures.[22] To what extent do you think this bias affected the Deepwater Horizon oil rig explosion in 2010? A presidential oil-spill commission concluded that technological arrogance, hubris, and the overconfidence bias played major roles (see Real World/Real People on page 337).[23]
6. **Hindsight bias.** Imagine yourself in the following scenario: You are taking an OB course that meets Tuesday and Thursday, and your professor gives unannounced quizzes each week. It's the Monday before a class, and you are deciding whether to study for a potential quiz or to watch Monday night football. Two of your classmates have decided to watch the game rather than study because they don't think there will be a quiz the next day. The next morning you walk into class and the professor says, "Take out a sheet of paper for the quiz." You turn to your friends and say, "I knew we were going to have a quiz; why did I listen to you?" The hindsight bias occurs when knowledge of an outcome influences our belief about the probability that we could have predicted the outcome earlier. We are affected by this bias when we look back on a decision and try to reconstruct why we decided to do something.
7. **Framing bias.** This bias relates to the manner in which a question is posed. Consider the following scenario: Imagine that the United States is preparing for the outbreak of an unusual Asian disease that is expected to kill 600 people. Two alternative programs to combat the disease have been proposed.

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Overconfidence Bias Partly to Blame for Oil-Rig Disaster

According to Bob Bea, an engineering professor at the University of California Berkely, "technological disasters, like the PB oil spill, follow a well-worn "trail of tears." Bea has investigated 630 different types of disasters and is an expert on offshore drilling.

"Bea categorizes disasters into four groups. One such group is when an organization simply ignores warning signs through overconfidence and incompetence. He thinks the BP spill falls into that category. Bea pointed to congressional testimony that BP ignored problems with a dead battery, leaky cement job, and loose hydraulic fittings."

"Disasters don't happen because of 'an evil empire,' Bea said. 'It's hubris, arrogance, and indolence.'"

"Cutting-edge technology often works flawlessly. At first, everyone worries about risk. Then people get lulled into complacency by success, and they forget that they are operating on the edge, say experts who study disasters. Corners get cut, problems ignored. Then boom."

Charles Perrow, a professor at Yale University, concluded that "there's nothing safe out there. We like to pretend there is and argue afterward, 'That's why we took the risks, because it hadn't failed before.'"

How could BP have overcome the overconfidence bias?

Assume that the exact scientific estimates of the consequences of the programs are as follows:

Program A: If Program A is adopted, 200 people will be saved.

Program B: If Program B is adopted, there is a one-third probability that 600 people will be saved and a two-thirds probability that no people will be saved.

Which of the two programs would you recommend?[24] Research shows that most people chose Program A even though the two programs produce the same results. This result is due to the framing bias. The framing bias is the tendency to consider risks about gains—saving lives–differently than risks pertaining to losses—losing lives. You are encouraged to frame decision questions in alternative ways in order to avoid this bias.

8. **Escalation of commitment bias.** The escalation of commitment bias refers to the tendency to stick to an ineffective course of action when it is unlikely that the bad situation can be reversed. Personal examples include investing more money into an old or broken car or putting more effort into improving a personal relationship that is filled with conflict. A business example pertains to Blockbuster "asking creditors to put up more money to help it exit bankruptcy protection, prompting a debate among bondholders about whether to invest further in the struggling video chain or put it up for sale."[25] Would you invest in Blockbuster? Researchers recommend the following actions to reduce the escalation of commitment:
   - Set minimum targets for performance, and have decision makers compare their performance against these targets.
   - Regularly rotate managers in key positions throughout a project.

- Encourage decision makers to become less ego-involved with a project.
- Make decision makers aware of the costs of persistence.[26]

TO THE POINT

What is thrust of evidence-based decision making, and what does it take to implement this approach in organizations?

LO.3 Evidence-Based Decision Making

Interest in the concept of evidence-based decision making stems from two sources. The first is the desire to avoid the decision-making biases discussed in the previous section, and the second is research done on evidence-based medicine. Dr David Sackett defines evidence-based medicine as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients." Researchers and practitioners are studying evidence-based medicine because research suggests that physicians make only 15% of their decisions based on evidence, and this approach helps determine the most efficient use of health care resources.[27] OB researchers have taken this framework and applied it to the context of managerial decision making.

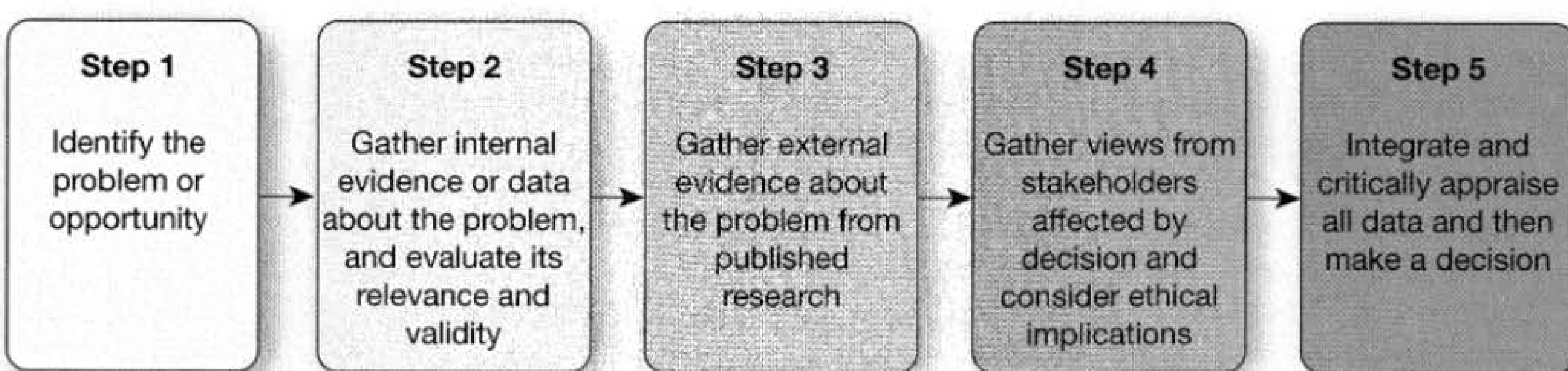
Quite simply, **evidence-based decision making** (EBDM) represents a process of conscientiously using the best available data and evidence when making managerial decisions. We explore this new approach to decision making by beginning with a model of EBDM and then reviewing a set of implementation principles that can help companies to implement this model of decision making. We conclude by examining the reasons why it is hard to implement EBDM. Understanding this material will help you reduce the susceptibility to decision-making biases.

A Model of Evidence-Based Decision Making (EBDM)

Figure 12–2 illustrates a five-step model of EBDM.[28] You can see that the process begins by gathering internal and external data and evidence about a problem at hand. This information is then integrated with views from stakeholders (e.g., employees, shareholders, customers) and ethical considerations to make a final decision. All told, the process shown in Figure 12–2 helps managers to face hard facts and avoid their personal biases when making decisions. EBDM's use of relevant and reliable data from different sources is clearly intended to make any decision-making context more explicit, critical, systematic, and fact based.

It is important to consider that evidence is used in three different ways within the process depicted in Figure 12–2: to make a decision, to inform a decision, and to support a decision.[29] "Evidence is used to *make* a decision whenever the decision follows directly from the evidence." For example, if you wanted to purchase a particular used car (e.g., Toyota Prius) based on price and color (e.g., red), you

figure 12–2 Evidence-Based Decision-Making Model



SOURCE: Derived from R B Briner, D Denyer, and D M Rousseau, "Evidence-Based Management: Concept Cleanup Time?" *Academy of Management Perspectives*, November 2009, pp 19–32.

would obtain data from the Internet and classified ads and then choose the seller offering the lowest priced red Prius. "Evidence is used to inform a decision whenever the decision process combines hard, objective facts with qualitative inputs, such as intuition or bargaining with stakeholders." For instance, in hiring new college graduates, objective data about applicants' past experience, education, and participation in student organizations would be relevant input to making a hiring decision. Nonetheless, subjective impressions garnered from interviews and references would typically be combined with the objective data to make a final decision. These two uses of evidence are clearly positive and should be encouraged. The same cannot be said about using evidence to support a decision.

"Evidence is used to *support* a decision whenever the evidence is gathered or modified for the sole purpose of lending legitimacy to a decision that has already been made." This application of evidence has both positive and negative effects. On the positive side, manufactured evidence can be used to convince an external audience that the organization is following a sound course of action in response to a complex and ambiguous decision context. This can lead to confidence and goodwill about how a company is responding to environmental events. On the negative side, this practice can stifle employee involvement and input because people will come to believe that management is going to ignore evidence and just do what it wants. There are two takeaways about using evidence to support a decision. First, this practice should not always be avoided. Second, because this practice has both pros and cons, management needs to carefully consider when it "might" be appropriate to ignore disconfirming evidence and push its own agenda or decisions.

Seven Implementation Principles

Stanford professors Jeffrey Pfeffer and Robert Sutton have been studying evidence-based management for quite some time. Based on this experience, they offer seven implementation principles to help companies integrate EBDM into an organization's culture.[30]

1. **Treat your organization as an unfinished prototype.** The thrust of this principle involves creating a mindset that the organization is an unfinished prototype that may be broken and in need of repair, thus avoiding the hubris and arrogance of concluding that nothing needs to be changed in the organization. For example, the products QVC sells are chosen through a process of experimentation in which EBDM is used to understand why some products sell and others don't. The use of experiments, as done at QVC, is one recommendation for making this happen. The Real World/Real People on page 340 illustrates how one retailer uses experimentation to determine the best type of promotions.[31]
2. **No brag, just facts.** This slogan is used by DaVita, a company that operates 600 dialysis centers, to reinforce a culture that supports EBDM. The company measures, monitors, and rewards the effectiveness of its dialysis centers

evidence-based decision making
Conscientiously using the best data when making decisions.

real WORLD // real PEOPLE

A Retailer Experiments with Discount Promotions

The retailer designed six experimental conditions—a control and five discount levels that ranged from 0 to 35% for the private-label items. The retailer divided its stores into six groups, and the treatments were randomized across the groups. This meant each store had a mixture of the experimental conditions distributed across the different products in the study. For example, in Store A—label sugar was discounted 20%, and private-label mascara was full price, whereas in Store B mascara was discounted, but sugar was not. This experimental design allowed the retailer to control for variations in sales that occurred because the store groups were not identical.

The test revealed that matching the national brand promotions with moderate discounts on the private-label products generated 10% more profits than not promoting the private-label items. As a result, the retailer now automatically discounts private-label items when the competing national brands are under promotion.

Why don't more companies do experiments like this?

SOURCE: Excerpted from E T Anderson and D Simester, "Every Company Can Profit from Testing Customers' Reactions to Changes. Here's How to Get Started," *Harvard Business Review*, March 2011, p 103.

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and patient well-being on a regular basis. In contrast, Hewlett-Packard's former CEO Carly Fiorina bragged to the press about the company's merger with Compaq but failed to do any research on consumers' opinions about Compaq products prior to the merger. These products were viewed as among the worst in the industry.

3. **See yourself and your organization as outsiders do.** Many managers are filled with optimism and inflated views of their talents and chances for success. This leads them to downplay risks and to commit an escalation of commitment bias. "Having a blunt friend, mentor, or counselor," Pfeffer and Sutton suggest, "can help you see and act on better evidence."
4. **Evidence-based management is not just for senior executives.** Research shows that the best organizations are those in which all employees, not just top managers, are committed to EBDM.[32] Pfeffer and Sutton encourage managers to "treat employees as if a big part of their job is to invent, find, test, and implement the best ideas." This implies that employees must be given the training and resources needed to engage in EBDM.
5. **Like everything else, you still need to sell it.** "Unfortunately, new and exciting ideas grab attention even when they are vastly inferior to old ideas," say Pfeffer and Sutton. "Vivid, juicy stories and case studies sell better than detailed, rigorous, and admittedly dull data—no matter how wrong the stories or how right the data." This means that you will need to similarly use vivid stories and case studies such as the DaVita example used earlier to sell the value of EBDM. You can also hire gurus to help sell the value of evidence-based practices.
6. **If all else fails, slow the spread of bad practice.** Because employees may face pressures to do things that are known to be ineffective, it may be necessary to engage in what Pfeffer and Sutton call "evidence-based misbehavior." This can include ignoring requests and delaying action. Be cautious if you use this principle.
7. **The best diagnostic question: what happens when people fail?** "Failure hurts, it is embarrassing, and we would rather live without it," say the Stanford professors. "Yet there is no learning without failure. . . . If you look at how the most effective systems in the world are managed, a hallmark is that when something goes wrong, people face the hard facts, learn what

happened and why, and keep using those facts to make the system better." The US civil aviation system is a good example. It has created the safest system in world through its accident and incident reporting system. Ford's CEO Alan Mulally is another example. He meets with his top 15 executives every Thursday morning at 7 A.M. for 2½ hours to conduct a business plan review. "He requires his direct reports to post more than 300 charts, each of them color-coded red, yellow, or green to indicate problems, caution, or progress. . . . Afterward, the adjoining Taurus and Continental rooms are papered with these charts so Mulally can study them. As the CEO likes to say, 'You can't manage a secret. When you do this every week, you can't hide.'"[33]

Why Is It Hard to be Evidenced Based?

Despite the known value of using EBDM, there are seven reasons why it is hard for anyone to bring the best evidence to bear when making decisions. They are: (1) There's too much evidence. (2) There's not enough good evidence. (3) The evidence doesn't quite apply. (4) People are trying to mislead you. (5) You are trying to mislead you. (6) The side effects outweigh the cure. (7) Stories are more persuasive, anyway.[34]

Dynamics of Decision Making

Decision making is part science and part art. Accordingly, this section examines decision-making styles, which is part of the "science" component. It is important to understand decision-making styles because they influence the manner in which people make decisions. We also examine the "art" side of the equation by discussing the role of intuition in decision making and a decision tree for making ethical decisions. An understanding of these dynamics can help managers make better decisions.

TO THE POINT

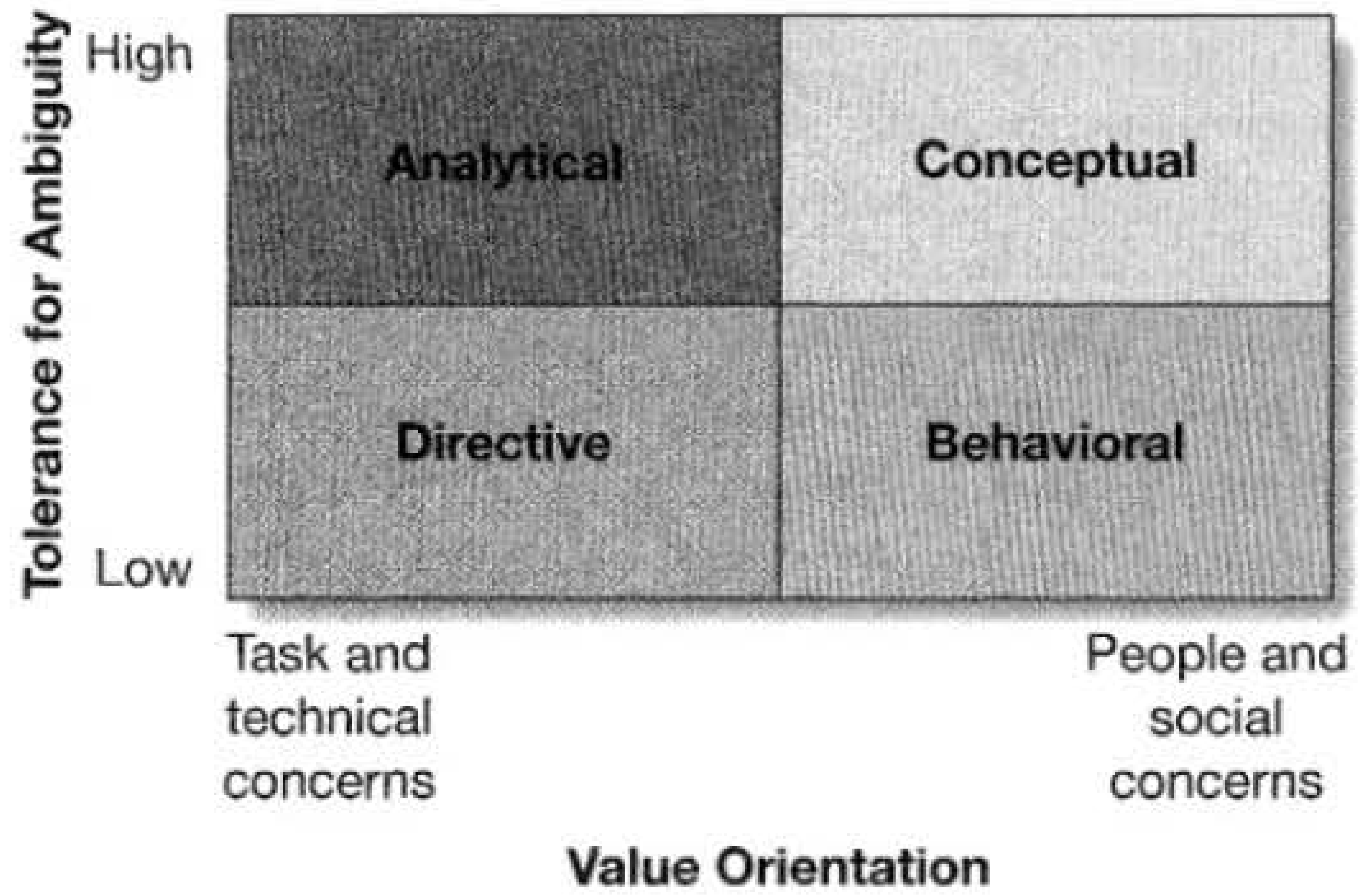
What are the key conclusions regarding decision-making styles, intuition in decision making, and ethical decision making?

LO.4 General Decision-Making Styles

This section focuses on how an individual's decision-making style affects his or her approach to decision making. A **decision-making style** reflects the combination of how an individual perceives and comprehends stimuli and the general manner in which he or she chooses to respond to such information.[35] A team of researchers developed a model of decision-making styles that is based on the idea that styles vary along two different dimensions: value orientation and tolerance for ambiguity.[36] *Value orientation* reflects the extent to which an individual focuses on either task and technical concerns or people and social concerns when making decisions. Some people, for instance, are very task focused at work and do not pay much attention to people issues, whereas others are just the opposite. The second dimension pertains to a person's *tolerance for ambiguity*. This individual difference indicates the extent to which a person has a high need for structure or control in his or her life. Some people desire a lot of structure in their lives (a low tolerance for ambiguity) and find ambiguous situations stressful and psychologically uncomfortable. In contrast, others do not have a high need for structure and can thrive in uncertain situations (a high tolerance for ambiguity). Ambiguous

decision-making style A combination of how individuals perceive and respond to information.

figure 12–3 Decision-Making Styles



SOURCE: Based on discussion contained in A J Rowe and R O Mason, *Managing with Style: A Guide to Understanding, Assessing, and Improving Decision Making* (San Francisco: Jossey-Bass, 1987), pp 1–17.

situations can energize people with a high tolerance for ambiguity. When the dimensions of value orientation and tolerance for ambiguity are combined, they form four styles of decision making (see Figure 12–3): directive, analytical, conceptual, and behavioral.

Directive People with a *directive* style have a low tolerance for ambiguity and are oriented toward task and technical concerns when making decisions. They are efficient, logical, practical, and systematic in their approach to solving problems. People with this style are action oriented and decisive and like to focus on facts. In their pursuit of speed and results, however, these individuals tend to be autocratic, exercise power and control, and focus on the short run.

Interestingly, a directive style seems well suited for an air-traffic controller. Here is what Paul Rinaldi had to say about his decision-making style to a reporter from *Fortune*.

Example. It's not so much analytical as it is making a decision quickly and sticking with it. You have to do that knowing that some of the decisions you're going to make are going to be wrong, but you're going to make that decision be right. You can't back out. You've constantly got to be taking into account the speed of the airplane, its characteristics, the climb rate, and how fast it's going to react to your instructions. You're taking all that in and processing it in a split second, hoping that it'll all work together. If it doesn't, then you go to plan B. . . . The percentage of us that make it to retirement is not real high. It takes a toll on you. We can't make mistakes.[37]

Analytical This style has a much higher tolerance for ambiguity and is characterized by the tendency to overanalyze a situation. People with this style like to consider more information and alternatives than do directives. Analytic individuals are careful decision makers who take longer to make decisions but who also respond well to new or uncertain situations. They can often be autocratic.

Zhang Guangming is a good example of someone with an analytical style. "Zhang Guangming's car-buying synapses have been in overdrive for months. He has spent hours poring over Chinese car buff magazines, surfing Web sites to mine data on various models, and trekking out to a dozen dealerships across Beijing. Finally, Zhang settled on either a Volkswagen Bora or a Hyundai Sonata sedan. But with cutthroat competition forcing dealers to slash prices, he's not sure whether to buy now or wait."[38]

Conceptual People with a conceptual style have a high tolerance for ambiguity and tend to focus on the people or social aspects of a work situation. They take a broad perspective to problem solving and like to consider many options and future possibilities. Conceptual types adopt a long-term perspective and rely on intuition and discussions with others to acquire information. They also are willing to take risks and are good at finding creative solutions to problems. On the downside, however, a conceptual style can foster an idealistic and indecisive approach to decision making. Howard Stringer, Sony Corporation's first foreign-born CEO, possesses characteristics of a conceptual style.

Example. Mr Stringer's dilemma is that he is caught between different management styles and cultures. He says he recognizes the risk of falling behind amid breakneck changes in electronics. But he says there's an equal risk of moving too aggressively. "I don't want to change Sony's culture to the point where it's unrecognizable from the founder's vision," he says. . . . Mr Stringer, 65 years old, stuck with [an] executive team he inherited. He tried gently persuading managers to cooperate with one another and urged them to think about developing products in a new way.[39]

Behavioral This style is the most people oriented of the four styles. People with this style work well with others and enjoy social interactions in which opinions are openly exchanged. Behavioral types are supportive, receptive to suggestions, show warmth, and prefer verbal to written information. Although they like to hold meetings, people with this style have a tendency to avoid conflict and to be too concerned about others. This can lead behavioral types to adopt a wishy-washy approach to decision making and to have a hard time saying no to others and to have difficulty making difficult decisions.

Research and Practical Implications Research shows that very few people have only one dominant decision-making style. Rather, most managers have characteristics that fall into two or three styles. Studies also show that decision-making styles vary by age, occupations, personality types, gender, and countries.[40] You can use knowledge of decision-making styles in four ways. First, knowledge of styles helps you to understand yourself. Awareness of your style assists you in identifying your strengths and weaknesses as a decision maker and facilitates the potential for self-improvement. Second, you can increase your ability to influence others by being aware of styles. For example, if you are dealing with an analytical person, you should provide as much information as possible to support your ideas. This same approach is more likely to frustrate a directive type. Third, knowledge of styles gives you an awareness of how people can take the same information and yet arrive at different decisions by using a variety of decision-making strategies. Different decision-making styles represent one likely source of interpersonal conflict at work (conflict is thoroughly discussed in Chapter 13). Finally, it is important to remember that there is not a single best decision-making style that applies in all situations. It is most beneficial to use a contingency approach in which you use a style that is best suited for the situation at hand. For example, if the context requires a quick decision, then a directive style might be best. In contrast, a behavioral approach would be more appropriate when making decisions that involve employees' welfare. At this point we cannot provide more detailed recommendations because researchers have not developed a complete contingency theory that outlines when to use the different decision-making styles.

LO.5 The Role of Intuition in Decision Making

In the book *How We Decide*, author Jonah Lehrer concluded that intuition is effectively used by many people when making decisions.[41] **Intuition** represents judgments, insights, or decisions that "come to mind on their own, without explicit awareness of the evoking cues and of course without explicit evaluation of the validity of these cues."[42] Research reveals that anyone can be intuitive, and its use is unrelated to gender.[43] It thus is important to understand the sources of intuition and to develop your intuitive skills because intuition is as important as rational analysis in many decisions. Consider the following examples:

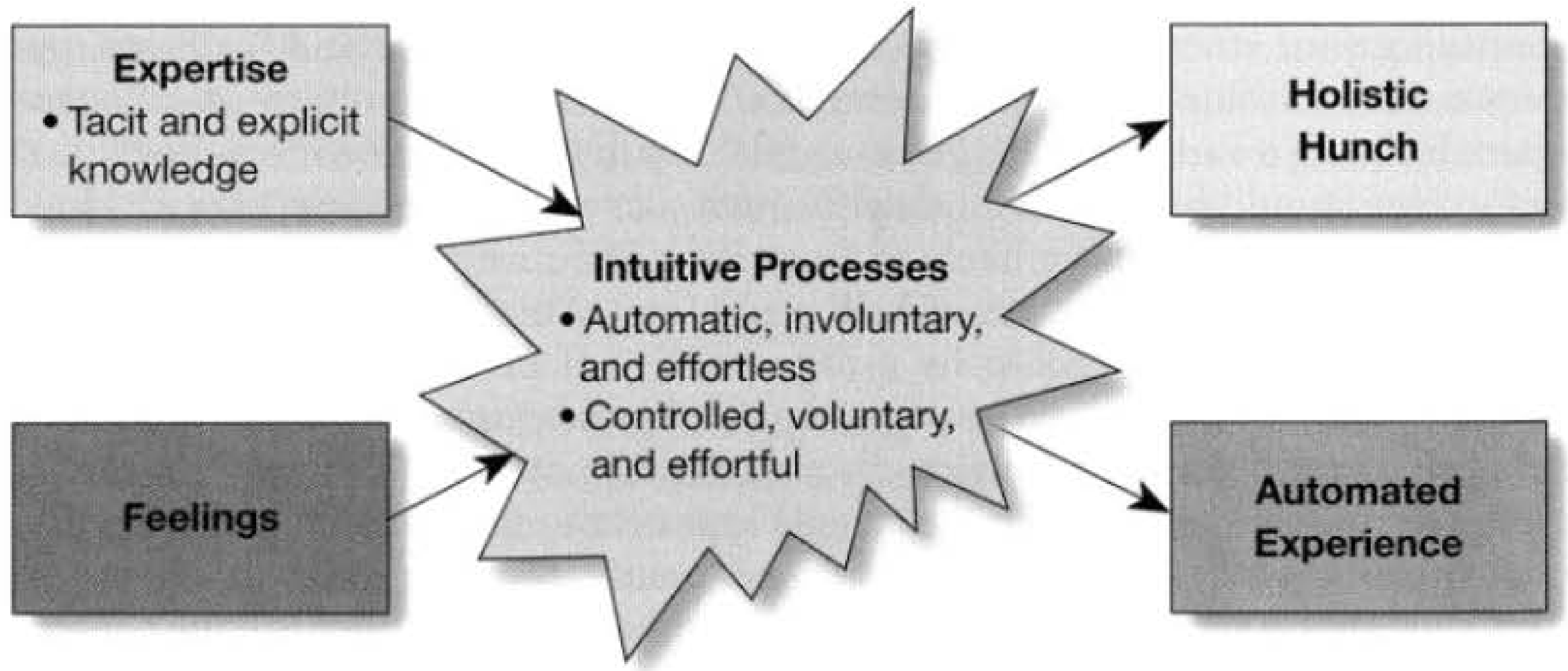
Example. Ignoring recommendations from advisers, Ray Kroc purchased the McDonald's brand from the McDonald brothers: "I'm not a gambler and I didn't have that kind of money, but my funny bone instinct kept urging me on." Ignoring numerous naysayers and a lack of supporting market research, Bob Lutz, former president of Chrysler, made the Dodge Viper a reality. "It was this subconscious, visceral feeling. And it just felt right." Ignoring the fact that 24 publishing houses had rejected the book and her own publishing house was opposed, Eleanor Friede gambled on a "little nothing book," called *Jonathan Livingston Seagull:* "I felt there were truths in this simple story that would make it an international classic."[44]

Unfortunately, the use of intuition does not always lead to blockbuster decisions such as those by Ray Kroc or Eleanor Friede. To enhance your understanding of the role of intuition in decision making, this section reviews a model of intuition and discusses the pros and cons of using intuition to make decisions.

A Model of Intuition Figure 12–4 presents a model of intuition. Starting at the far right, the model shows there are two types of intuition:

1. A holistic hunch represents a judgment that is based on a subconscious integration of information stored in memory. People using this form of intuition

figure 12–4 A Dual Model of Intuition



SOURCES: Based in part on D Kahneman and G Klein, "Conditions for Intuitive Expertise," *American Psychologist*, September 2009, pp 515–26; E Sadler-Smith and E Shefy, "The Intuitive Executive: Understanding and Applying 'Gut Feel' in Decision-Making," *Academy of Management Executive*, November 2004, pp 76–91; and C C Miller and R D Ireland, "Intuition in Strategic Decision Making: Friend or Foe in the Fast-Paced 21st Century," *Academy of Management Executive*, February 2005, pp 19–30.

may not be able to explain why they want to make a certain decision, except that the choice "feels right."

2. Automated experiences represent a choice that is based on a familiar situation and a partially subconscious application of previously learned information related to that situation. For example, when you have years of experience driving a car, you react to a variety of situations without conscious analysis.

Returning to Figure 12–4, you can see that intuition is represented by two distinct processes. One is automatic, involuntary and mostly effortless. The second is quite the opposite in that it is controlled, voluntary, and effortful. Research reveals that these two processes can operate separately or jointly to influence intuition.[45] For example, when trying to answer one of the "Back to Chapter-Opening Case" questions in this book, you may spontaneously have an answer pop into your mind based on your recollection of what you previously read (an automatic process). Upon further reflection (controlled process), however, you may decide your initial thought is wrong and that you need to go back and reread some material to arrive at another answer. This in turn may cause novel ideas to come to mind, and the two processes continue. These intuitive processes are influenced by two sources: expertise and feelings (see Figure 12–4). Expertise represents an individual's combined explicit knowledge (i.e., information that can easily be put into words) and tacit knowledge (i.e., information gained through experience that is difficult to express and formalize) regarding an object, person, situation, or decision opportunity. This source of intuition increases with age and experience. The feelings component reflects the automatic, underlying effect one experiences in response to an object, person, situation, or decision opportunity. An intuitive response is based on the interaction between one's expertise and feelings in a given situation.

Pros and Cons of Using Intuition When Making Decisions

On the positive side, intuition can speed up the decision-making process.[46] Intuition thus can be valuable in our complex and ever-changing world. Intuition may be a practical approach when resources are limited and deadlines are tight. For example, intuition based on deep knowledge and active preparation informs quick and complicated decisions in an effective hospital emergency department. Recalling her work as director of an emergency department, Kathleen Gallo says, "While the arrival of a helicopter with a whole family of car-wreck victims might look like a crisis and might be a crisis for the family, it is not a crisis for the staff . . . because they are prepared."[47]

On the downside, intuition is subject to the same types of biases associated with rational decision making. It is particularly susceptible to the availability and representativeness heuristics, as well as the anchoring, overconfidence, and hindsight biases.[48] In addition, the decision maker may have difficulty convincing others that the intuitive decision makes sense, so a good idea may be ignored.

Where does that leave us with respect to using intuition? We believe that intuition and rationality are complementary and that managers should attempt to use both when making decisions. We thus encourage you to use intuition when making decisions. You can develop your intuitive awareness by using the guidelines shown in Table 12–1.

intuition Judgments that come to mind without explicit awareness of the causes or an evaluation of their validity.

table 12–1 Guidelines for Developing Intuitive Awareness

RECOMMENDATION	DESCRIPTION
1. Open up the closet	To what extent do you experience intuition; trust your feelings; count on intuitive judgments; suppress hunches; covertly rely upon gut feel?
2. Don't mix up your I's	Instinct, insight, and intuition are not synonymous; practice distinguishing among your instincts, your insights, and your intuitions.
3. Elicit good feedback	Seek feedback on your intuitive judgments; build confidence in your gut feel; create a learning environment in which you can develop better intuitive awareness.
4. Get a feel for your batting average	Benchmark your intuitions; get a sense for how reliable your hunches are; ask yourself how your intuitive judgment might be improved.
5. Use imagery	Use imagery rather than words; literally visualize potential future scenarios that take your gut feelings into account.
6. Play devil's advocate	Test out intuitive judgments; raise objections to them; generate counter-arguments; probe how robust gut feel is when challenged.
7. Capture and validate your intuitions	Create the inner state to give your intuitive mind the freedom to roam; capture your creative intuitions; log them before they are censored by rational analysis.

SOURCE: From E Sadler-Smith and E Shefy, "The Intuitive Executive: Understanding and Applying 'Gut Feel' in Decision-Making," *Academy of Management Executive*, November 2004, p 88. Copyright © 2004 by The Academy of Management. Reproduced by permission of The Academy of Management via Copyright Clearance Center.

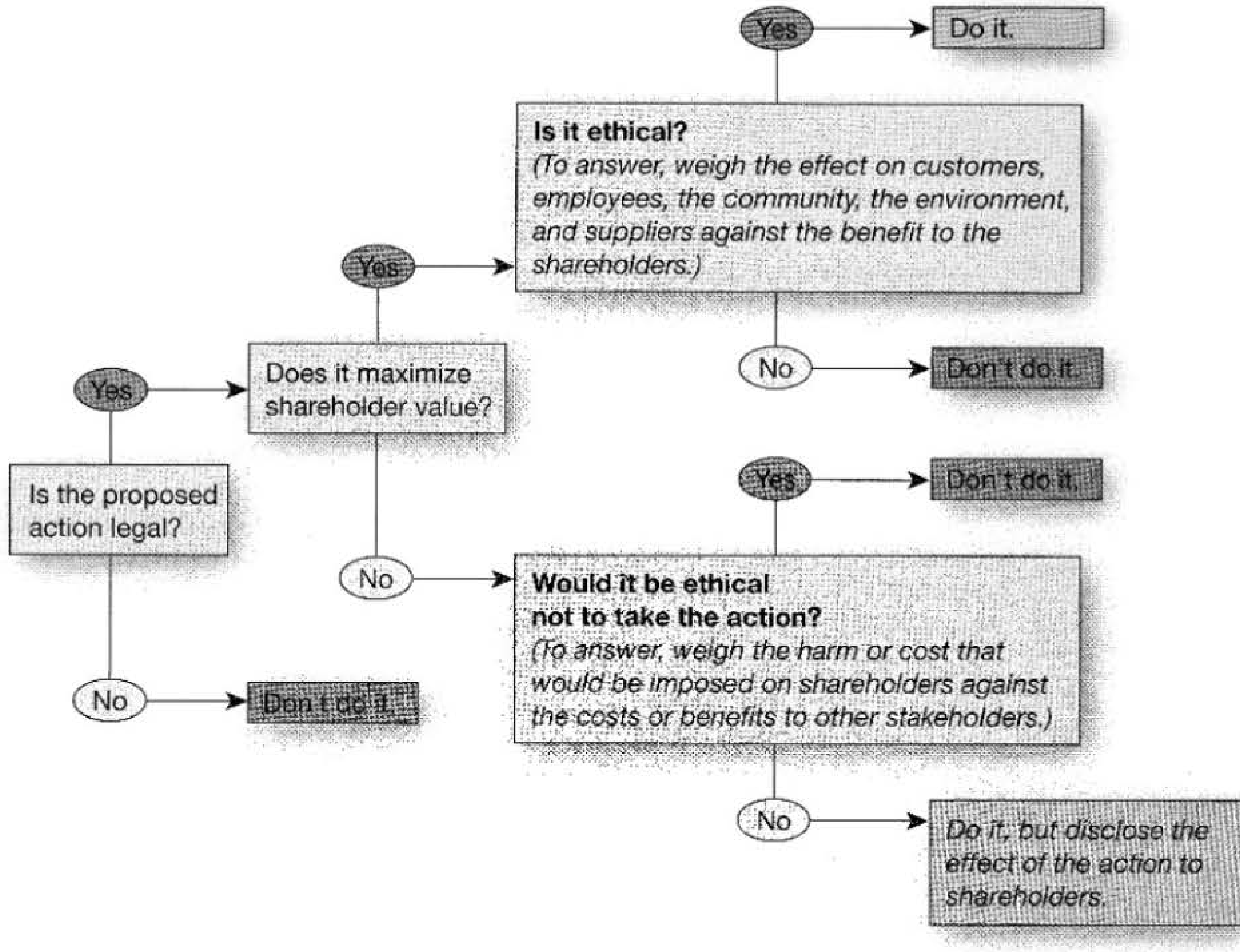
Back to the Chapter-Opening Case

How will Google's approach to decision making increase the use of intuition in making decisions?

Road Map to Ethical Decision Making: A Decision Tree

In Chapter 1 we discussed the importance of ethics and the growing concern about the lack of ethical behavior among business leaders. Unfortunately, research shows that many types of unethical behavior go unreported, and unethical behavior is negatively associated with employee engagement.[49] While these trends partially explain the passage of laws to regulate ethical behavior in corporate America, we believe that ethical acts ultimately involve individual or group decisions. It thus is important to consider the issue of ethical decision making. Harvard Business School professor Constance Bagley suggests that a decision tree can help managers to make more ethical decisions.[50]

figure 12–5 An Ethical Decision Tree



SOURCE: Reprinted by permission of *Harvard Business Review*. Exhibit from "The Ethical Leader's Decision Tree," by Constance E Bagley, February 2003.

A **decision tree** is a graphical representation of the process underlying decisions and it shows the resulting consequences of making various choices. Decision trees are used as an aid in decision making. Ethical decision making frequently involves trade-offs, and a decision tree helps managers navigate through them. The decision tree shown in Figure 12–5 can be applied to any type of decision or action that an individual manager or corporation is contemplating. Looking at the tree, the first question to ask is whether or not the proposed action is legal. If the action is illegal, do not do it. If the action is legal, then consider the impact of the action on shareholder value. A decision maximizes shareholder value when it results in a more favorable financial position (e.g., increased profits) for an organization. Whether or not an action maximizes shareholder value, the decision tree shows that managers still need to consider the ethical implications of the decision or action. For example, if an action maximizes shareholder value, the next question to consider is whether or not the action is ethical. The answer to this question is based on considering the positive effect of the action on an organization's other key constituents (i.e., customers, employees, the community, the environment, and

decision tree Graphical representation of the process underlying decision making.

suppliers) against the benefit to the shareholders. According to the decision tree framework, managers should make the decision to engage in an action if the benefits to the shareholders exceed the benefits to the other key constituents. Managers should not engage in the action if the other key constituents would benefit more from the action than shareholders.

Figure 12–5 illustrates that managers use a slightly different perspective when their initial conclusion is that an action does not maximize shareholder value. In this case, the question becomes, Would it be ethical not to take action? This question necessitates that a manager consider the *harm or cost* of an action to shareholders against the *costs or benefits* to other key constituents. If the costs to shareholders from a managerial decision exceed the costs or benefits to other constituents, the manager or company should not engage in the action. Conversely, the manager or company should take action when the perceived costs or benefits to the other constituents are greater than the costs to shareholders. Let us apply this decision tree to IBM's decision to raise the amount of money it required retirees to contribute to their health benefits.[51] The company made this decision in order to save money.

Is it legal for a company to decrease its contribution to retiree health care benefits while simultaneously raising retirees' contributions? The answer is yes. Does an organization maximize shareholder value by decreasing its retiree health care expenses? Again, the answer is yes. We now have to consider the overall benefits to shareholders against the overall benefits to other key constituents. The answer to this question is more complex than it appears and is contingent on an organization's corporate values. Consider the following two examples. In company one, the organization is losing money and it needs cash in order to invest in new product development. Management believes that new products will fuel the company's economic growth and ultimate survival. This company's statement of corporate values also reveals that the organization values profits and shareholder return more than employee loyalty. In this case, the company should make the decision to increase retirees' health care contributions. Company two, in contrast, is profitable and has been experiencing increased market share with its products. This company's statement of corporate values also indicates that employees are the most important constituent it has, even more than shareholders: Southwest Airlines is a good example of a company with these corporate values. In this case, the company should not make the decision to decrease its contribution to retirees' benefits.

It is important to keep in mind that the decision tree cannot provide a quick formula that managers and organizations can use to evaluate every ethical question. Ethical decision making is not always clear-cut and it is affected by cross-cultural differences. Organizations are encouraged to conduct ethics training and to increase awareness about cross-cultural issues when the work involves people with mixed cultural backgrounds.[52] That said, the decision tree does provide a framework for considering the trade-offs between managerial and corporate actions and managerial and corporate ethics. Try using this decision tree the next time you are faced with a significant ethical question or problem.

Group Decision Making

TO THE POINT

What are the pros and cons of group decision making and the various problem-solving techniques?

Groups such as committees, task forces, project teams, or review panels often play a key role in the decision-making process. ATA Engineering Inc., for example, is committed to group decision making.

Example. At least eight to 10 ATA employees are involved in interviewing every job candidate. If one employee objects to the hire, the candidate may not be offered a job unless that employee changes his or her mind. Sometimes, even the biggest company decisions are made by workers. When the lease was up on the company's building, for instance, ATA formed a committee of employees to address the issue. The group decided to stay put, after determining the current location was convenient to the majority of employees.[53]

Is ATA right in assuming that two or more heads are always better than one? Do all employees desire to have a say in the decision-making process? To what extent are managers involving employees in the decision-making process? What techniques do groups use to improve their decision making? Are face-to-face meetings more effective than computer-aided decision making? This section provides the background for answering these questions. We discuss (1) group involvement in decision making, (2) advantages and disadvantages of group-aided decision making, and (3) group problem-solving techniques.

HBR CASE STUDY

The Best of Intentions

by John Humphreys

Cynthia Mitchell just stared at her boss, Peter Jones. She admired him a great deal, but she couldn't believe what she had just heard.

"Let me get this straight," she said. "I shouldn't give Steve Ripley this assignment, even though he's the most qualified candidate, because the clients won't let him succeed?"

"It's your decision—and Steve's, if you decide to offer him the job. But I think it would be a big mistake," Peter replied.

"Because he's black," Cynthia prompted. "And because we're automatically assuming that the mostly white farmers in this district won't trust their books to a black professional?"

Peter flushed. "We don't assume it. We know it. Just ask Betty Inez and Hugh Conley. They were every bit as good as Ripley. But we—okay, I was blind to the unpleasant reality that plenty of discrimination still exists out there, like it or not. Because of my ignorance, they both failed miserably in districts that looked a lot like this one. It wasn't their fault, but their careers with AgFunds got derailed anyway. I want to give Steve a fighting chance, and I want AgFunds to have a better record developing minority managers."

Cynthia sighed. "This feels all wrong to me, Peter, but I know you wouldn't raise the issue if it didn't have any substance. Let me think about it."

Personal Experience

And think about it she did. Cynthia had flown to Houston earlier in the week for AgFunds' regional district managers meeting and had been enjoying getting to know her colleagues over dinners at a variety of excellent restaurants—a welcome relief from her rural Arkansas district, where the culinary choices ran the gamut from barbecue to, well, barbecue. She was new at her job, and the other district managers—all white men—had made her feel welcome and offered her survival tips.

HBR's cases, which are fictional, present common managerial dilemmas and offer concrete solutions from experts.

Tonight, though, she stayed put at her hotel. First she worked out in the gym, then she ordered a Caesar salad and a beer from room service. While she waited for the food, she took a quick shower. When she finally settled down to her meal, she found she didn't have any appetite. The situation with Steve Ripley was making her really tense. It brought up bad memories. She sat back, sipped her beer, and remembered how her own career at AgFunds had started.

It wasn't so long ago. A Minnesota native with an undergraduate degree from Purdue, Cynthia had earned an MBA from the University of Kansas. She wanted to stay in the Midwest, and she wanted to work with the agricultural community. She had originally planned to pursue a career with the Chicago Board of Trade, but the opportunities there hadn't seemed promising. AgFunds—a financial services company specializing in investments and accounting services for farmers and farmer-owned cooperatives—had pursued her aggressively. She had joined the firm as an investment trainee in the Chicago office after graduation, just four years ago. Her first year wasn't that different from being in school; she spent most of her time studying for the exams she had to take to become a fully licensed representative. She thrived in the competitive training environment and was considered the top graduate in her class.

The best trainees that year were all vying for a position in northern Indiana. Mike Graves, a highly successful investment rep, was being promoted to district manager. Within six years, Mike had turned a declining stream of clients in Indiana into one of the company's largest and most coveted portfolios. Cynthia wanted the job badly and was sure she had a good shot at it. Her interview with Mike went well, or so she thought. She was half planning the move to Indiana when she received an e-mail announcing that the job had gone to her fellow trainee Bill Hawkins. She was genuinely surprised. Bill was a great guy, but his credentials didn't measure up to hers. In fact, she'd spent a lot of time tutoring him after he failed an early licensing test.

When she ran into Mike shortly thereafter, she congratulated him on his promotion. He seemed self-conscious, and before long he stumbled into an explanation for why she hadn't been picked for the plum job: "Eventually you'll be a better rep than Bill. I know it, and you know it. But this just wasn't the right territory for you. It's very conservative. Our customers wouldn't be comfortable doing business with a woman. One day you'll thank me for not putting you into a situation where you'd fail."

Thank him? Cynthia had felt more like strangling him. But, like a good sport, she offered him some politically correct conciliatory statements—"I'm sure you made the right choice; you know the territory," and so forth—and kept looking. A month later, she landed a less appealing but perfectly adequate sales rep's position in a northern Ohio district. Presumably, the district was more hospitable to women, though she'd had to prove herself to plenty of crusty male customers. Cynthia had done extremely well in the three years she spent there—well enough to be considered a rising star at AgFunds. So she wasn't surprised when Peter, the Houston-based regional vice president who oversaw eight southern districts in Arkansas, Louisiana, Mississippi, New Mexico, and Texas, recruited her to run the Arkansas district. The new position was a stretch; reps didn't usually get promoted this quickly, but she felt ready for the challenge.

And it definitely was a challenge. Arkansas was once a great district, but it had been losing customers for 15 years, thanks to a 25-year veteran who had gotten more and more comfortable in coasting mode. Peter had finally pushed the guy into early retirement and brought Cynthia in to shake things up. The sales force wasn't that bad; it had just been poorly managed. But Cynthia desperately needed at least one powerhouse rep. Privately, she admitted to herself that what she really needed was a clone of herself four years ago—somebody fresh out of school who was talented, ambitious, and extremely hungry.

She considered recruiting the second-best rep from her old region (he happened to be a good friend), but she wanted to look first at the recent crop of eager trainees. She was intrigued to discover that Steve Ripley, this year's top trainee, was inexplicably available three months after the training period had ended. He looked great on paper: a recent MBA from UCLA, a successful summer internship at AgFunds, a stint overseas as an economic analyst for the U.S. government. So why he was still available? Poor interpersonal skills, perhaps? When she met Steve, Cynthia discovered that this was far from true. He was personable, quick-witted, bright, an excellent conversationalist. He was also a black man in a company whose workforce was overwhelmingly white.

She had interviewed Steve just this week, while she was in Houston for the off-site, and she had ended the meeting wondering, very simply, how she'd gotten so lucky and when he could start. Within a few hours, though, her curiosity about why he was still available had resurfaced. When she asked a few discreet questions, her fellow district managers in Arkansas were evasive; they seemed uncomfortable. The longest-tenured of them finally told her that Steve wasn't necessarily a great fit in some parts of their region and suggested that she discuss the situation with Peter before she made an offer.

Set Up to Fail?

Cynthia shifted uncomfortably in her hotel room chair. She poked at her salad with distaste then scraped at the label on her half-empty Saint Arnold beer as she replayed this morning's meeting with Peter in her mind.

It hadn't gone well.

"We need to talk about Steve Ripley," she had started. "He's a remarkable candidate. Why wouldn't I hire him if I could get him?"

"Your predecessor didn't think he was a good fit," Peter had said gently. "I have to tell you I think he was right. And it's not because I'm a bigot. I can see you're wondering about that. Steve's fantastic. He's one of the best trainees we've had through here in years. But the biggest customers in your district don't want to work with a black guy. It's as simple as that."

"So if some big customers are discriminatory, we'll let them dictate our hiring policy?" Cynthia had challenged.

Peter had winced at her remark. "Look, Steve's going to be outstanding. He just deserves to start out in a more hospitable district. Once the right opportunity opens up, he'll be hired, and he'll do brilliantly."

Cynthia, remembering the job she'd lost out on in Indiana, then countered by saying, "So Steve has far fewer opportunities open to him than other, less-qualified applicants do."

"I know it doesn't sound fair, and in one sense it isn't," Peter had said. "But if Steve fails in his first assignment, it becomes extremely difficult to promote him—we'll be accused of favoritism or the very worst form of affirmative action. And let's not forget we have some obligation to maximize profits. I can almost guarantee you that won't happen in your district if you hire Steve. If our customers won't buy from Steve, it hurts the shareholders, it hurts Steve, it hurts you. Okay? How is that a good thing?"

"Let me get this straight," she said. "I shouldn't give Steve Ripley this assignment, even though he's the most qualified candidate, because the clients won't let him succeed?"

Cards on the Table

Cynthia didn't sleep well that night. She tossed around, half awake, half asleep, agonizing about what her next step should be. Could she hire Steve against the explicit advice of her new boss? What would it mean for her career if Peter turned out to be right, and Steve didn't work out? Undoubtedly the easiest course would be to keep looking, perhaps to hire her colleague from Ohio, who was, after all, a proven quantity. But that didn't feel right.

During one of those 3am moments of apparent clarity that so often come to insomniacs, Cynthia decided to lay things on the line with Steve. At 8 am, she called his house and asked if they could meet for lunch. He agreed.

"Look, what I'm about to tell you is sensitive," she said four hours later as she faced Steve over glasses of bubbly water at the Daily Review Café. "So I'm taking a chance. But I'm sure you sense a lot of what I'm going to say, so let's just talk about it openly."

"Sure, what's up?" He looked both quizzical and slightly disappointed.

"Oh Lord, he expected an offer," she thought to herself. Cynthia took a deep breath and started by telling him the story of how she lost the job in northern Indiana to a less qualified candidate and how much that had bothered her. She filled him in on the conversation with Peter the day before. By the time she'd finished, he was leaning back in his chair, sipping his water, eyes narrowed.

"I'm not sure what to say," he offered after a pause.

"No need to say anything yet. The thing is," she continued, "this is a company where women and minorities can get ahead. I know that from personal experience. And I walked in knowing I had to work harder and perform better than other candidates. I'm sure you did, too. But the folks in senior positions sometimes decide what's best for candidates without consulting them. I know I resented that a lot when it happened to me. I don't want to continue that pattern. I'm not ready to offer you the job, but I do want you to know what's being talked about, and I'm curious to know what your response is."

Cynthia half expected Steve to start selling himself again, as he had during their initial interview—to ask for the chance to prove himself, even if it was a tough territory. But his response was more tempered than that.

"As long as we're being open with each other, I have to say I'm not sure. I'd like to stay in this part of the country for a few years, for personal reasons, but I don't want to take a job that sets me up for failure. There are other districts in this region where blacks have done well."

Cynthia was feeling deflated. "So—so you want to withdraw from being considered?"

"I didn't say that. I guess I want to be sure that if you offer me the job, I won't be walking into a disaster. I don't mind long odds, but I don't want impossible odds," he responded.

Sensing her confusion, Steve smiled quickly, his considerable charm in evidence. "I'm sorry if it seems like I'm just lobbing the ball back into your court, Cynthia. But from what you've told me about your own experience, I trust you to make the right call. I really do."

Should Cynthia hire Steve?

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Chapter 11

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PROBLEM SOLVING

OBJECTIVES By the end of this chapter, you should be able to:

A. Explain the four stages of problem solving.

B. Describe the red/green modes of problem solving.

C. Identify the different roles a facilitator or manager plays during the problem solving process.

D. Learn how to facilitate a problem-solving meeting.

E. Explain Six Sigma and Appreciative Inquiry.

WHY NOT?

IDEAS WAITING TO HAPPEN

While some people claim that the route to innovation is indescribable, we believe there's often a simple, recurrent structure to creative thinking. Most original ideas aren't completely original, but instead are the result of two basic things: problems in search of solutions and solutions in search of problems.

Both approaches have their advantages. If this seems odd, think of television game shows. *Who Wants to Be a Millionaire* looks for the right answer, while *Jeopardy!* starts with the answer and looks for the right question.

Once a problem has been identified, how do you go about finding a solution? Watching your customers is a fine place to start. Rather than invent a new solution from scratch, you can take the imperfect, often Rube Goldberg* solutions that people have already found and improve on them.

But consumer watching has its limits. While the unexpected reaction of consumers often signals that something is wrong with a product, there are many problems customers cannot solve on their own. This is because real-world consumers have limited resources.

So an alternative tool is to ask how an unconstrained consumer would solve the problem. We call this approach "What would Croesus** do?" as a shorthand for imagining solutions where price is no object. These may lead you to a solution that is affordable.

In his day, Howard Hughes had a Croesus-like flair for spending money to find solutions to problems. Imagine that it's 1966 and that you're Hughes. You sometimes have a hankering to watch old Bogart films. Unfortunately, the VCR has yet to be invented. What do you do?

Hughes bought a Las Vegas television station and used it as his private VCR. Whenever he wanted, he'd call up the station's general manager and tell him what movie to put on that night. We understand that the station played a lot of *Casablanca* and *The Maltese Falcon*.

*Rube Goldberg was a famous cartoonist known for drawing tremendously complex devices that perform simple tasks in convoluted ways.

**King Croesus ruled over Lydia in Western Asia Minor (now Turkey) from 560 to 546 BC. The expression "as rich as Croesus" was based on his legendary wealth. The Lydians were the first people to mint coins.

In this spirit, our "What would Croesus do?" approach begins by imagining a customized and very expensive solution. We don't begin with a view that the solution has to be practical. Instead, we ask: Are there any solutions at all?

Problem: Having to wait on hold at a customer service number Donald Trump or Bill Gates wouldn't spend much time on hold. They would have an assistant stay on the line and buzz them when the call goes through.

Mere mortals can't afford personal assistants. Is there any way ordinary folks could emulate this "personal assistant" strategy? Well, yes. Instead of waiting on hold to speak with an airline customer representative, why not have the airline call you back? With caller ID, you wouldn't even have to enter your number. Waiting on hold is not only a pain for the caller but also expensive for the company if it's paying for a toll-free line.

Huge sums are being spent right now on technology to move telephone support centers to low-wage countries. We invite airlines and other corporations to think about applying a little technology to the problem of making your customers less irate.

Problem: Cash management for the household Your checking account earns next to no interest, yet you may be paying 6 percent on your mortgage. Why don't you just take all your cash and prepay your mortgage? That way you would effectively earn an extra 6 percent on your money. Unfortunately, this proposal is impractical. You need to have some cash to pay bills and cover emergencies. If you put all of your money into your mortgage, you couldn't get it back when you needed it.

A modern Croesus—or any sizable corporation—could solve the liquidity problem by employing an assistant to do sophisticated cash management, using money market funds and a standby credit line. Ordinary folk can get the same result only by spending an inordinate amount of time shuffling balances back and forth. But what if the bank were willing to help out? What if the bank set up a combined mortgage/checking account that charges the homeowner only for the net indebtedness? A person with a $200,000 mortgage and a $10,000 checking balance would be charged mortgage interest only on $190,000.

If you are a retail banker, your first instinct is to reject the idea. Your profitability hangs on having a certain number of customers with idle cash balances. Why give the homeowner an easy means to shrink checking balances or to prepay high-rate mortgages? But think about all the time customers squander right now trying to manage their cash. Wouldn't it be possible to price the combo account in such a way that the bank is as profitable as before but the customer is still happy because he has been spared a lot of paperwork?

In 1997, Richard Branson's Virgin teamed up with AMP and the Royal Bank of Scotland to offer the Virgin One account, which nets cash balances against mortgage debt. Your salary is electronically deposited into this account. Any checks you write or credit card charges you incur are taken out of the account, thereby increasing your outstanding mortgage.

By late 2001, Virgin One had 70,000 customers. Today it's a very successful mortgage product in England. This creative idea was worth money. The Royal Bank of Scotland bought out Virgin and AMP's combined 50 percent share for $150 million in July 2001.

The combo account has come at long last to these shores. Wells Fargo launched a similar product in October 2002 and claims that it is its most successful product launch.

Sometimes it isn't helpful to start the problem-solving process by identifying a problem. The solution has to come first. Only after we've discovered a better way do we realize in retrospect that there was a problem to be solved. Take an existing solution and find a new application.

Solution: Round-the-clock rental start times Avis rents cars 24 hours a day, starting any time of the day (or night). What's the new application—that is, what other rentals should be flexible with the starting time? Anyone who's landed in Europe on an overnight flight can answer this question: hotel rooms. You arrive at 7:00 a.m. and want to shower and change, but it's six hours until check-in time.

Hotels would have to make an effort to provide this convenience. Coordinating room cleanings should be more challenging. And reservations would have to include a check-in time to ensure that a room would be available. But if Avis can program its computers to handle the problem, surely Sheraton can, too. Some airport hotels have begun offering this service. We think that some city center hotels should follow suit, perhaps dedicating one floor for this service.

Solution: Inflation-indexed bonds The U.S. Treasury protects you from unanticipated inflation by offering TIPS, or Treasury Inflation-Protected Securities. What else could be indexed? Municipal bonds. This has been done only a handful of times. They would be immensely attractive to investors who worry about both inflation and taxes. Right now investors in TIPS still face the risk of uncertain taxes on their returns because federal tax is due on both the real return (now about 2 percent) and the inflation kicker. If inflation hits 8 percent and the bonds start paying 10 percent, your aftertax, net-of-inflation return will be in the neighborhood of negative 1.5 percent. A state offering an indexed return could probably offer a real return not much more than 1 percent to 2 percent and still get a lot of takers.

Solution: Battery-operated spinners The Spin Pop, introduced in 1993, was one of the most successful new interactive candy launches ever. More than 85 million of these motorized lollipop holders have been sold worldwide. Hold your tongue steady and spin the candy against it. Now, what other question does the Spin Pop answer? After roaming the aisles of Wal-Mart, the Spin Pop creators found the right question: how to drive down the price of the electric toothbrush. Spin Pop gave birth to SpinBrush. In a little under four years John Osher and others turned a $1.5 million investment into a $475 million payout when Procter & Gamble bought them out.

Sometimes flipping things around provides a useful solution to a different problem. What we call symmetry takes an existing solution in a given context and turns it around to get a new perspective. Inflation-indexed bonds are a great idea. Turn this around. Would it also work to borrow at an inflation-indexed rate? This flip leads us to the inflation-indexed mortgage. Each year your payments go up with the rate of inflation. In countries with high inflation, such loans are standard. Even with low inflation, such as the 2 percent in the United States, these loans would allow people to borrow up to 50 percent more or to start off with payments that are a third less. Young families could suddenly afford to buy a lot bigger house.

For the most part, people find an answer that works and don't get in the habit of looking for an even better solution. Or we think there is some natural way of doing things and stop looking for alternatives.

Take the ketchup bottle. Did you ever store one upside down in order to make it flow faster? How long did it take for Hunt's and H.J. Heinz to figure out they could turn the label upside down? According to Heinz's Casey Keller, the change was no small matter: "We believe this is probably the biggest idea in ketchup since the invention of the plastic squeeze bottle." In the old days Heinz used Carly Simon's "Anticipation" in its marketing. The updated campaign is "No wait. No mess. No anticipation." Ketchup is not the only product to take advantage of this insight: Toothpaste, shampoo and even sour cream are now available upside down.

Coming up with a great idea is only the beginning of the battle. If you really want to change your company or the world, you need to sell the idea and you need others to buy in. In pitching an idea, try to make it familiar. It's hard enough for listeners to absorb a radically new idea. Don't make them also absorb a new context. Colgate has applied this rule brilliantly with its new Simply White tooth-whitening gel. The home-use tooth whitener is an unfamiliar product. Yet the Colgate product evokes a strong déjà vu—its packaging bears a powerful resemblance to that for Wite-Out, the familiar typo corrector.

Got a good idea? Don't get carried away with secrecy. If you can't make money on it yourself, share it The open-source movement in software development shows that a dispersed community of code writers can succeed in developing interlocking products that are free to the world.

We propose an open-source movement for everyday ingenuity. If you generate valuable ideas, even ones that seem to speak for themselves, you are likely to be in demand to help put them into practice. Being known as an idea person tends to pay big rewards in our society. Instead of hoarding ideas in hopes of a killer payoff, put the ideas out there and see what happens.

THE KNOWLEDGE BASE

No problem can be solved from the same level of consciousness that created it.

Albert Einstein

For many scholars who study organizations and management, the central characteristic of organizations is that they are problem-solving systems whose success is measured by how efficiently they solve the routine problems associated with accomplishing their primary mission—be it manufacturing automobiles or selling insurance—and how effectively they respond to the emergent problems and opportunities associated with survival and growth in a changing world. Kilmann's view is representative of this perspective:

> *One might even define the essence of management as problem defining and problem solving, whether the problems are well structured, ill structured, technical, human, or even environmental. Managers of organizations would then be viewed as problem managers, regardless of the types of products and services they help their organizations provide. It should be noted that managers have often been considered as generic decision makers rather than as problem solvers or problem managers. Perhaps decision making is more akin to solving well-structured problems where the nature of the problem is so obvious that one can already begin the process of deciding among clear-cut alternatives. However, decisions cannot be made effectively if the problem is not yet defined and if it is not at all clear what the alternatives are, can, or should be.*[1]

In this view, the core task of management is problem solving. Views on problem solving, however, have expanded due to two major changes. First, more organizations are looking not at problems but at opportunities and what they do best. The discussion on Appreciative Inquiry is an example of this trend. Second, problem solving has been delegated in many organizations to employees, starting with employee involvement groups and total quality management to Six Sigma and project teams. Problem-solving techniques are now taught at all levels in companies that have a continuous improvement orientation. In addition to profiting from their ideas, involving employees in problem solving empowers them, gains their commitment to solutions, and develops their management skills.

General Electric's Work-Out program is a prime example of an organization-wide effort at involving employees in problem solving. Large companies have many competitive advantages due to their size. Unless they take special measures, however, they can also become inefficient, resistant-to-change bureaucracies characterized by rigid functional silos. GE addressed this danger with Work-Out, a program designed to cut through bureaucracy and across boundaries to solve problems fast with the help of people at all levels of the company. First, a large group of employees address a concern, a "target opportunity," identified by employees or senior management. Next, cross-functional and cross-level teams come up with recommendations. Finally, the teams present the recommendations to senior management who discusses the recommendations with them and, on the spot, accepts or rejects them. (This is similar to the action learning that takes place in the "Women and Global Leadership at Bestfoods" case, at the end of this book.) Work-Out has saved GE over $100 million.[2] Although it was designed to counter the disadvantages of a large bureaucracy, Work-Out has also been used successfully in small firms.

Groups are used in solving complex problems when no one person has all the necessary information, skills, and diverse perspectives. Other people contribute new dreams, new ideas, information, and help in getting things done. As such, problem solving is not just a mental puzzle but also a social process that requires communication, perception, creativity, conflict management, and group and facilitation skills. Employees at all levels are more likely to be committed to implementing the solutions to problems if they have participated in the problem solving process. Therefore, the decision about who is invited to problem solving groups is critical. As a general rule, those who are likely to be critical in the implementation stage of a solution should be members of the problem solving team, along with those who have the most knowledge about the situation and the most power to change it.

A Model of Problem Solving

Some of the frequent mistakes people make in problem solving are failing to see the potential opportunities in problems, leaping too quickly to discussing potential solutions before completely analyzing the problem, and not focusing enough on implementation issues. The Kolb model of problem solving as a dialectical process[3] shown in Exhibit 11–1 is designed to prevent these mistakes. This structured approach to problem solving is designed to facilitate a thorough consideration of complex problems. This is a normative model, which means that it shows how a process is done ideally. Not surprisingly, the model is based on Kolb's theory of experiential learning found in Chapter 3. It consists of four analytical stages that correspond to the four stages of the experiential learning cycle: Stage 1, situation analysis, corresponds to concrete experience; Stage 2, problem analysis, to reflective observation; Stage 3, solution analysis, to abstract conceptualization; and Stage 4, implementation analysis, to active experimentation. These four stages form a nested sequence of activities in that each stage requires the solution of a particular analytical task to frame the succeeding stage properly. The major focus of each stage is captured in these questions:

Situation Analysis: What's the Most Important Problem?
Problem Analysis: What Are the Causes of the Problem?
Solution Analysis: What's the Best Solution?
Implementation Analysis: How Do We Implement the Solution?

The stages will be described in depth after we introduce another key element of the model, the dialectics of problem solving.