CHAPTER 2

The Evolution of Management Thought

Learning Objectives

After studying this chapter, you should be able to:

LO2-1 Describe how the need to increase organizational efficiency and effectiveness has guided the evolution of management theory.

LO2-2 Explain the principle of job specialization and division of labor, and tell why the study of person–task relationships is central to the pursuit of increased efficiency.

LO2-3 Identify the principles of administration and organization that underlie effective organizations.

LO2-4 Trace the changes in theories about how managers should behave to motivate and control employees.

LO2-5 Explain the contributions of management science to the efficient use of organizational resources.

LO2-6 Explain why the study of the external environment and its impact on an organization has become a central issue in management thought.

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A MANAGER'S CHALLENGE

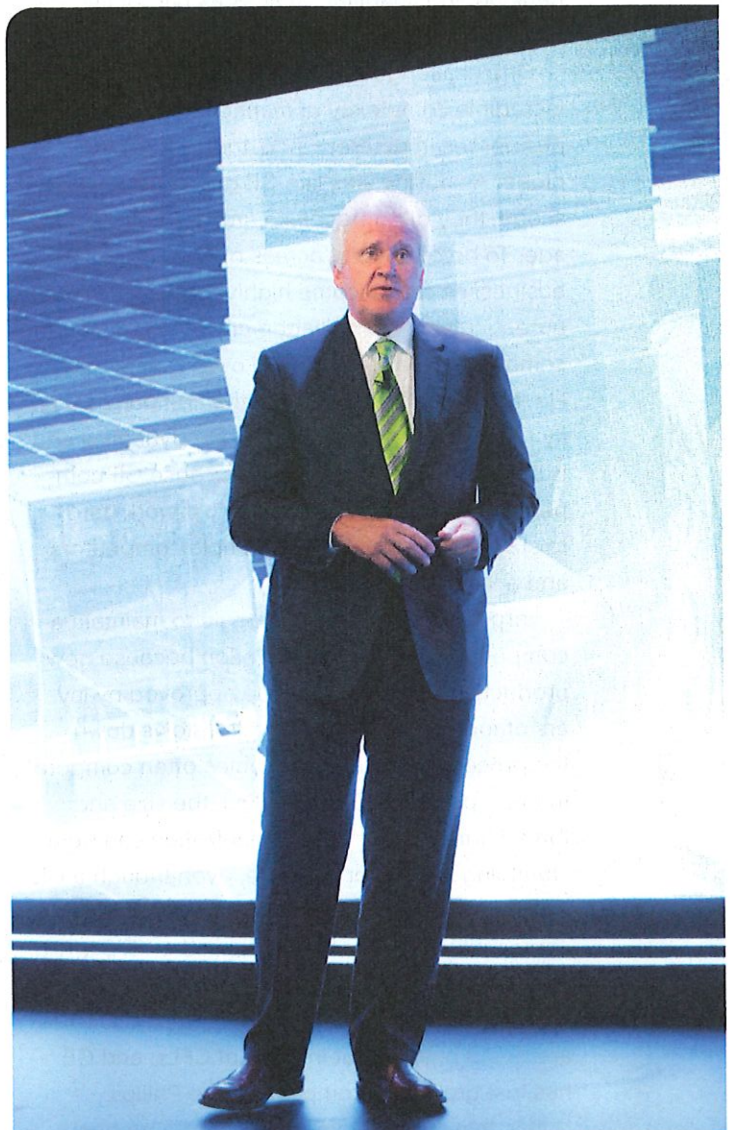
Simplifying Business Strategies at GE

What is the best way to maintain a competitive edge? More than ever before, companies must learn how to adapt and remain competitive in a changing global marketplace. And sometimes companies have to completely re-think their corporate strategies when their business becomes too diverse and somewhat unwieldy. General Electric is one example of a company that grew at a fast pace by acquiring different types of businesses. However, in recent years, senior management has made some strategic moves to simplify its business mix in an effort to increase value to shareholders and to position the company for continued success.

The company was created in 1892 from the merger of two companies: the Edison General Electric Company and the Thomas-Houston Company. (It is the only company included in the original 1896 Dow Jones Industrial Index that is still included today.) Thomas Edison and Charles Coffin pioneered the development of the incandescent lightbulb, which heats a filament wire, using electricity, until it emits light. The filament is protected from oxidation by a glass bulb that contains inert gas or a vacuum. GE was not the first company to produce and sell such bulbs and related electrical equipment. However, Edison and Coffin used their combined expertise and patents to produce practical, affordable lightbulbs relatively easily, which gave them a competitive advantage.

Originally, GE produced lightbulbs and related electrical equipment at its headquarters in Schenectady, New York. Over the years it expanded to serve customers in more than 160 nations with a lineup of multiple businesses and several hundred products. To do this, GE draws on the talents of more than 300,000 employees.

GE's birth as a merger established a pattern for quick growth by diversifying its businesses through merger and acquisition of other firms, as well as development of new business



GE CEO Jeffrey Immelt has refocused the company's competitive strategies by simplifying its business mix.

portfolios. In 1911 GE bought the National Electric Lamp Association, which strengthened its distribution and product portfolio. A few short years later, in 1919, GE formed the Radio Corporation of America (RCA). RCA was intended to operate as a retailer for General Electric's radios but grew into a large business of its own. Since then, GE has diversified into aircraft engines, computers, medical technology, entertainment, wind power, appliances, and even petroleum extraction products. It also branched out into banking and financial services as part of its growth strategy.

One challenge inherent in this growth is the incredible complexity of managing multiple businesses in different industries across the globe. As businesses like GE grow in size and scope, they often become cumbersome to manage. To be consistent across operations, these businesses can become highly formalized and bureaucratic. This management style enables a company to maintain control over its operations. However, it can also impede the company's ability to respond to changing market dynamics and is likely to hinder innovation. Because GE competes in multiple industries, it must work hard to stay agile in the face of multiple competitors and a large global footprint.

Large companies also struggle to maintain a competitive edge with innovation because new products or offerings must be approved by layers of formal bureaucracy, which slows down the process. Because companies often compete to bring products to market first, the size and formal bureaucracy of an organization can be a stumbling block. For example, even though a GE engineer, Edward Hammer, developed the spiral compact fluorescent light (CFL) in the 1970s, GE's management decided to shelve the project due to cost concerns. Today incandescent bulbs are being phased out in favor of CFLs, and GE has lost ground to competitors like Philips.

It is this competitive and challenging business environment that caused General Electric CEO Jeffrey Immelt and his management team to take a long, critical look at the company's diverse portfolio of businesses and make some drastic changes. Focusing on the goal of becoming a "digital industrial company," Immelt has simplified GE's business by selling off GE Capital (sold to various financial entities for more than $200 billion); its home appliance business (sold to China's Haier for more than $5 billion); its share of NBCUniversal (sold to Comcast for $16.7 billion), and other businesses that no longer fit the industrial focus Immelt sees as fertile ground for GE's future success.[1]

But GE is not just shedding businesses for the sake of becoming lean and mean. It's also buying companies that support Immelt's vision of a digital industrial company. In 2015 GE completed its largest acquisition ever, buying Alstom, a French power and grid business, for more than $9 billion. GE believes that Alstom will extend the company's global reach in the power generation business. In addition, the company recently announced the creation of Current—a start-up business that will focus on developing products and services in energy efficiency for large customers, like hospitals, universities, retailers, and even cities.[2]

Time will tell whether GE's dramatic simplification will help keep the company on a continued path of success. According to Immelt, GE is leaving a world of disconnected businesses, financial spreadsheets, and bureaucratic workflows and taking a giant leap to agile teams that are mission-based. He also acknowledges that he needs to make the "new" GE a place where young, talented leaders will want to work and continue to innovate. In this digital, quick-paced business environment, he believes that speed and simplification are synonymous with quality and innovation. For GE to succeed, a culture of simplification is essential for investors, customers, and employees.[3]

Overview

As this sketch of the evolution of management thinking at GE suggests, changes in management practices occur as managers, theorists, researchers, and customers look for ways to increase how efficiently and effectively products can be made. The driving force behind the evolution of management theory is the search for better ways to use organizational resources to make goods and services. Advances in management thought typically occur as managers and researchers find better ways to perform the principal management tasks: planning, organizing, leading, and controlling human and other organizational resources.

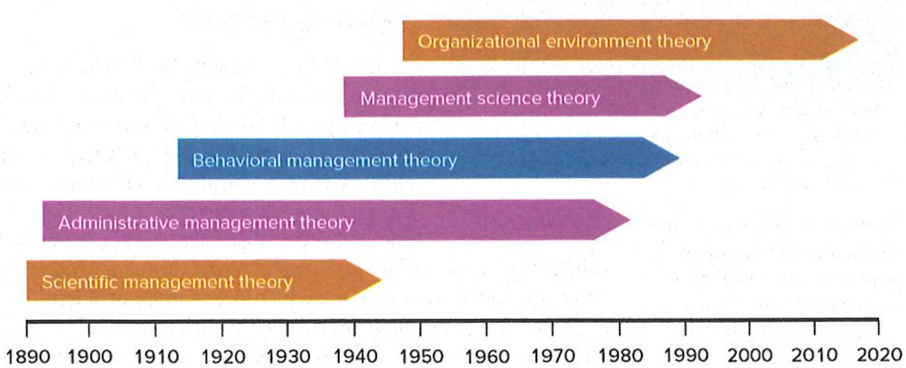
In this chapter we examine how management thought has evolved in modern times and the central concerns that have guided ongoing advances in management theory. First we examine the so-called classical management theories that emerged around the turn of the 20th century. These include scientific management, which focuses on matching people and tasks to maximize efficiency, and administrative management, which focuses on identifying the principles that will lead to the creation of the most efficient system of organization and management. Next we consider behavioral management theories, developed both before and after World War II; these focus on how managers should lead and control their workforces to increase performance. Then we discuss management science theory, which developed during World War II and has become increasingly important as researchers have developed rigorous analytical and quantitative techniques to help managers measure and control organizational performance. Finally, we discuss changes in management practices from the middle to the late 20th century and focus on the theories developed to help explain how the external environment affects the way organizations and managers operate.

By the end of this chapter you will understand how management thought and theory have evolved over time. You will also understand how economic, political, and cultural forces have affected the development of these theories and how managers and their organizations have changed their behavior as a result. In Figure 2.1 we summarize the chronology of the management theories discussed in this chapter.

Scientific Management Theory

The evolution of modern management began in the closing decades of the 19th century, after the industrial revolution had swept through Europe and America. In the new economic climate, managers of all types of organizations—political, educational, and economic—were trying to find better ways to satisfy customers' needs. Many major economic, technical, and cultural changes were taking place. The introduction of steam power and the development of sophisticated machinery and equipment changed how goods were produced, particularly in the weaving and clothing industries. Small workshops run by skilled workers who produced hand-manufactured products (a system called *crafts production*) were being replaced by large factories in which sophisticated machines controlled by hundreds or even thousands of unskilled or semiskilled workers made

Figure 2.1
The Evolution of Management Theory



LO2-1 Describe how the need to increase organizational efficiency and effectiveness has guided the evolution of management theory.

LO2-2 Explain the principle of job specialization and division of labor, and tell why the study of person–task relationships is central to the pursuit of increased efficiency.

products. For example, raw cotton and wool, which in the past had been spun into yarn by families or whole villages working together, were now shipped to factories, where workers operated machines that spun and wove large quantities of yarn into cloth.

Owners and managers of the new factories found themselves unprepared for the challenges accompanying the change from small-scale crafts production to large-scale, mechanized manufacturing. Moreover, many managers and supervisors in these workshops and factories were engineers who had only a technical orientation. They were unprepared for the social problems that occur when people work together in large groups in a factory or shop system. Managers began to search for new techniques to manage their organizations' resources, and soon they started focusing on ways to increase the efficiency of the worker–task mix.

Job Specialization and the Division of Labor

Initially, management theorists were interested in why the new machine shops and factory system were more efficient and produced greater quantities of goods and services than older, crafts-style production operations. Nearly 200 years before, Adam Smith had been one of the first writers to investigate the advantages associated with producing goods and services in factories. A famous economist, Smith journeyed around England in the 1700s, studying the effects of the industrial revolution.[4] In a study of factories that produced various pins or nails, Smith identified two different manufacturing methods. The first was similar to crafts-style production, in which each worker was responsible for all the 18 tasks involved in producing a pin. The other had each worker performing only one or a few of these 18 tasks.

job specialization The process by which a division of labor occurs as different workers specialize in different tasks over time.

Smith found that the performance of the factories in which workers specialized in only one or a few tasks was much greater than the performance of the factory in which each worker performed all 18 pin-making tasks. In fact, Smith found that 10 workers specializing in a particular task could make 48,000 pins a day, whereas those workers who performed all the tasks could make only a few thousand.[5] Smith reasoned that this performance difference occurred because the workers who specialized became much more skilled at their specific tasks and as a group were thus able to produce a product faster than the group of workers who each performed many tasks. Smith concluded that increasing the level of **job specialization**—the process by which a division of labor occurs as different workers specialize in tasks—improves efficiency and leads to higher organizational performance.[6]

Armed with the insights gained from Adam Smith's observations, other managers and researchers began to investigate how to improve job specialization to increase performance. Management practitioners and theorists focused on how managers should organize and control the work process to maximize the advantages of job specialization and the division of labor.

Frederick W. Taylor, founder of scientific management and one of the first people to study the behavior and performance of people at work.
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F. W. Taylor and Scientific Management

Frederick W. Taylor (1856–1915) is best known for defining the techniques of **scientific management**, the systematic study of relationships between people and tasks for the purpose of redesigning the work process to increase efficiency. Taylor was a manufacturing manager who eventually became a consultant and taught other managers how to apply his scientific management techniques. Taylor believed that if the amount of time and effort that each worker expends to produce a unit of output (a finished good or service) can be reduced by increasing specialization and the division of labor, the production process will become more efficient. According to Taylor, the way to create the most efficient division of labor could best be determined by scientific management techniques rather than by intuitive or informal, rule-of-thumb knowledge. Based on his

scientific management The systematic study of relationships between people and tasks for the purpose of redesigning the work process to increase efficiency.

experiments and observations as a manufacturing manager in a variety of settings, he developed four principles to increase efficiency in the workplace:

- Principle 1: *Study the way workers perform their tasks, gather all the informal job knowledge that workers possess, and experiment with ways of improving how tasks are performed.*

To discover the most efficient method of performing specific tasks, Taylor studied in great detail and measured the ways different workers went about performing their tasks. One of the main tools he used was a time-and-motion study, which involves the careful timing and recording of the actions taken to perform a particular task. Once Taylor understood the existing method of performing a task, he then experimented to increase specialization. He tried different methods of dividing and coordinating the various tasks necessary to produce a finished product. Usually, this meant simplifying jobs and having each worker perform fewer, more routine tasks, as at a pin factory or on a car assembly line. Taylor also sought to find ways to improve each worker's ability to perform a particular task—for example, by reducing the number of motions workers made to complete the task, by changing the layout of the work area or the type of tools workers used, or by experimenting with tools of different sizes.

- Principle 2: *Codify the new methods of performing tasks into written rules and standard operating procedures.*

Once the best method of performing a particular task was determined, Taylor specified that it should be recorded so this procedure could be taught to all workers performing the same task. These new methods further standardized and simplified jobs—essentially making jobs even more routine. In this way efficiency could be increased throughout an organization.

- Principle 3: *Carefully select workers who possess skills and abilities that match the needs of the task, and train them to perform the task according to the established rules and procedures.*

To increase specialization, Taylor believed workers had to understand the tasks that were required and be thoroughly trained to perform the tasks at the required level. Workers who could not be trained to this level were to be transferred to a job where they were able to reach the minimum required level of proficiency.[7]

- Principle 4: *Establish a fair or acceptable level of performance for a task, and then develop a pay system that rewards performance above the acceptable level.*

To encourage workers to perform at a high level of efficiency, and to give them an incentive to reveal the most efficient techniques for performing a task, Taylor advocated that workers benefit from any gains in performance. They should be paid a bonus and receive some percentage of the performance gains achieved through the more efficient work process.[8]

By 1910 Taylor's system of scientific management had become nationally known and in many instances was faithfully and fully practiced.[9] However, managers in many organizations chose to implement the new principles of scientific management selectively. This decision ultimately resulted in problems. For example, some managers using scientific management obtained increases in performance, but rather than sharing performance gains with workers through bonuses, as Taylor had advocated, they simply increased the amount of work that each worker was expected to do. Many workers experiencing the reorganized work system found that as their performance increased, managers required that they do more work for the same pay. Workers also learned that performance increases often meant fewer jobs and a greater threat of layoffs, because fewer workers were needed. In addition, the specialized, simplified jobs were often monotonous and repetitive, and many workers became dissatisfied with their jobs.

Scientific management brought many workers more hardship than gain and a distrust of managers who did not seem to care about workers' well-being.[10] These dissatisfied workers resisted attempts to use the new scientific management techniques and at times even withheld their job knowledge from managers to protect their jobs and pay. It is not difficult for workers to conceal the true potential efficiency of a work system to protect their interests. Experienced

machine operators, for example, can slow their machines in undetectable ways by adjusting the tension in the belts or misaligning the gears.

Unable to inspire workers to accept the new scientific management techniques for performing tasks, some organizations increased the mechanization of the work process. For example, one reason Henry Ford introduced moving conveyor belts in his factory was the realization that when a conveyor belt controls the pace of work (instead of workers setting their own pace), workers can be pushed to perform at higher levels—levels that they may have thought were beyond their reach. Charlie Chaplin captured this aspect of mass production in one of the opening scenes of his famous movie *Modern Times* (1936). In the film Chaplin caricatured a new factory employee fighting to work at the machine-imposed pace but losing the battle to the machine. Henry Ford also used the principles of scientific management to identify the tasks that each worker should perform on the production line and, thus, to determine the most effective division of labor to suit the needs of a mechanized production system.

From a performance perspective, the combination of the two management practices—(1) achieving the right worker–task specialization and (2) linking people and tasks by the speed of the production line—makes sense. It produces the huge cost savings and dramatic output increases that occur in large, organized work settings. For example, in 1908 managers at the Franklin Motor Company using scientific management principles redesigned the work process, and the output of cars increased from 100 cars a *month* to 45 cars a *day;* workers' wages, however, increased by only 90 percent.[11] From other perspectives, however, scientific management practices raise many concerns. Some companies, like McDonald's in the accompanying "Ethics in Action" feature, have codified management practices to protect workers.

ETHICS IN ACTION

McDonald's and Workers' Rights

When most individuals think about McDonald's, they might think of a Big Mac, a McChicken Sandwich, or perhaps Ronald McDonald, the lovable clown. Workers' rights probably would be far down the list.

However, McDonald's, like other global companies, has faced increased scrutiny about the way its employees are treated. McDonald's estimates that one in eight Americans has worked for the fast-food giant. Public figures such as Sharon Stone, Jay Leno, Shania Twain, Rachel McAdams, and Pink have been employed at McDonald's.

Fast-food work is not well paid, and it sometimes places employees in uncomfortable and stressful situations. In one case, a McDonald's franchise owner in Pennsylvania faced charges for requiring his foreign workers to live in expensive company-owned housing while underpaying them.[12]

In response to the increased scrutiny, the McDonald's corporation issued a report on the sustainability and corporate responsibility of its businesses. The McDonald's Corporation operates approximately 35,000 restaurants worldwide. Of these, 80 percent are owned by independent businesses or franchisees. This means that McDonald's has only indirect control over the majority of its restaurants. Yet the company has put in place a number of managerial controls designed to help ensure that all McDonald's employees are treated humanely and fairly.[13]

For example, McDonald's has hired a global chief compliance officer to ensure that its businesses comply with local and international regulations regarding the treatment of employees. This officer maintains a staff that travels to stores throughout the world to interview employees and ensure that each restaurant is complying with the standards the company has developed. McDonald's also conducts training on the

humane treatment of employees. Finally, McDonald's maintains a hotline for employees to report instances of mistreatment. To ensure that employees are not afraid to report violations, the company has a "nonretaliation policy" that protects employees from retaliation by management.[14]

Recently, however, the fast-food giant came under pressure in a case currently before the National Human Relations Board (NLRB), which suggests that McDonald's should be considered a "joint-employer" of the workers employed by company franchisees. This case has far-reaching implications for McDonald's as well as its competitors in the fast-food industry. A ruling against the Golden Arches could increase pressure on the company to boost wages and accept more responsibility for working conditions at franchise stores.[15]

Although the NLRB case is far from settled, McDonald's continues to work with company-owned outlets and franchise owners to ensure that all employees are treated well, and that any human rights violations will be quickly reported and resolved.

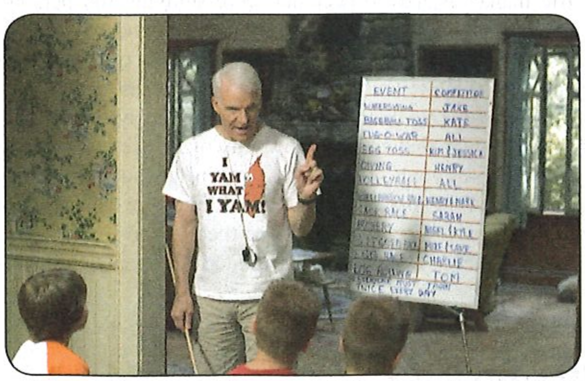
The Gilbreths

Two prominent followers of Taylor were Frank Gilbreth (1868–1924) and Lillian Gilbreth (1878–1972), who refined Taylor's analysis of work movements and made many contributions to time-and-motion study.[16] Their aims were to (1) analyze every individual action necessary to perform a particular task and break it into each of its component actions, (2) find better ways to perform each component action, and (3) reorganize each of the component actions so that the action as a whole could be performed more efficiently—at less cost in time and effort.

The Gilbreths often filmed a worker performing a particular task and then separated the task actions, frame by frame, into their component movements. Their goal was to maximize the efficiency with which each individual task was performed so that gains across tasks would add up to enormous savings of time and effort. Their attempts to develop improved management principles were captured—at times quite humorously—in the movie *Cheaper by the Dozen,* a new version of which appeared in 2004, which depicts how the Gilbreths (with their 12 children) tried to live their own lives according to these efficiency principles and apply them to daily actions such as shaving, cooking, and even raising a family.[17]

Eventually, the Gilbreths became increasingly interested in the study of fatigue. They studied how physical characteristics of the workplace contribute to job stress that often leads to fatigue and, thus, poor performance. They isolated factors that result in worker fatigue, such as lighting, heating, the color of walls, and the design of tools and machines. Their pioneering studies paved the way for new advances in management theory.

In workshops and factories, the work of the Gilbreths, Taylor, and many others had a major effect on the practice of management. In comparison with the old crafts system, jobs in the new system were more repetitive, boring, and monotonous as a result of the application of scientific management principles, and workers became increasingly dissatisfied. Frequently, the management of work settings became a game between workers and managers: Managers tried to initiate work practices to increase performance, and workers tried to hide the true potential efficiency of the work setting to protect their own well-being.[18] The story of how John D. Rockefeller built Standard Oil is another illustration of the same kind of management thinking (see the accompanying "Manager as a Person" feature).



This scene from the 2003 version of *Cheaper by the Dozen* illustrates how "efficient families" such as the Gilbreths use formal family courts to solve problems, such as assigning chores to different family members.

MANAGER AS A PERSON

John D. Rockefeller

On July 8, 1839, John D. Rockefeller was born. As a child, he showed an aptitude for finance. He earned money doing odd jobs and was able to save $50. Then, instead of spending the money, Rockefeller lent it to a farmer at a 7 percent interest rate.[19] This transaction was the beginning of Rockefeller's career.

In 1855 at the age of 16, Rockefeller attended Folsom's Commercial College, where he studied accounting and banking, among other subjects. That same year, he began seeking work in Cleveland, Ohio, as a clerk or accountant.[20] Eventually, he landed a job as an assistant bookkeeper.[21] Rockefeller's mathematical ability and conscientiousness soon gained him additional responsibilities at his company. This included helping manage the company's supply chain and attempting to optimize the profit from moving freight.

At the age of 19, Rockefeller created a commodities partnership with Maurice Clark. The American Civil War began in 1861, and prices and demand for commodities soared. Rockefeller's exposure to rail shipping showed him the potential of railroads as a mode of transferring freight and the importance of petroleum as a commodity. In 1862 Rockefeller entered the industry for which he would become famous: oil refining. As he learned the business, he devoted a significant amount of energy to increasing the efficiency of his refineries.

In February 1865 Rockefeller bought out his partners and then hired his brother, William, to help manage the operation, which he called the "Standard Works." He set up his business so that the refinery increased the scope and efficiency of production to develop and maintain economies of scale.[22]

In 1870 Rockefeller, along with his associates, founded the Standard Oil Company of Ohio.[23] At the time of its creation, the Standard Oil Company of Ohio serviced about 10 percent of the oil market. That same year, Rockefeller began implementing his vision to unite the area's oil producers and consolidate the industry. He handled negotiations with rival firms himself.

By 1872 Rockefeller had acquired nearly all the oil refineries in Cleveland. Inefficient operations were closed, while Rockefeller worked to improve the quality of the rest. By 1879, just eight years after its creation, Standard Oil had grown to managing almost 90 percent of the oil refining business. The business would make Rockefeller among the wealthiest men of his day. In response, Rockefeller gave most of his fortune away to charitable groups before his death.[24]

Administrative Management Theory

LO2-3 Identify the principles of administration and organization that underlie effective organizations.

While scientific managers like Rockefeller were studying the person–technology mix to increase efficiency, other managers and researchers were focusing on **administrative management**, the study of how to create an organizational structure and control system that leads to high efficiency and effectiveness. *Organizational structure* is the system of task and authority relationships that controls how employees use resources to achieve the organization's goals. Two of the most influential early views regarding the creation of efficient systems of organizational administration were developed in Europe: Max Weber, a German sociology professor, developed one theory; and Henri Fayol, the French manager who developed the model of management introduced in Chapter 1, developed the other.

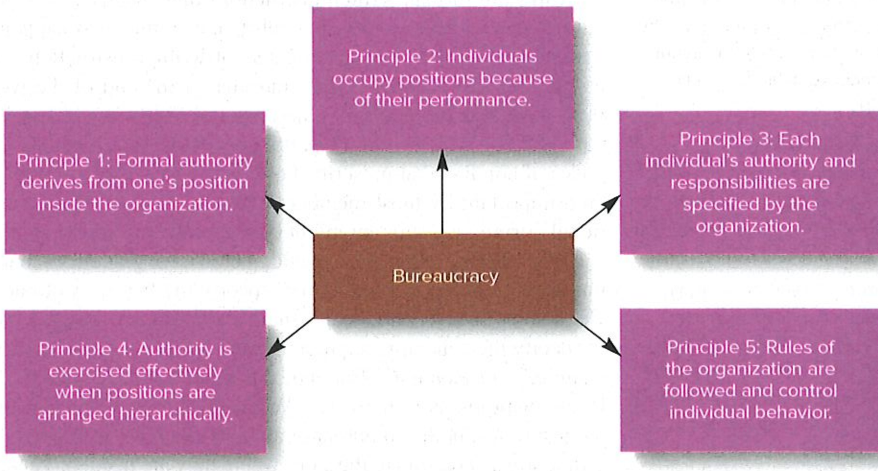
administrative management The study of how to create an organizational structure and control system that leads to high efficiency and effectiveness.

The Theory of Bureaucracy

Max Weber (1864–1920) wrote at the turn of the 20th century, when Germany was undergoing its industrial revolution.[25] To help Germany manage its growing industrial enterprises while it was striving to become a world power, Weber developed the principles of

Figure 2.2

Weber's Principles of Bureaucracy



bureaucracy A formal system of organization and administration designed to ensure efficiency and effectiveness.

bureaucracy—a formal system of organization and administration designed to ensure efficiency and effectiveness. A bureaucratic system of administration is based on the five principles summarized in Figure 2.2:

- Principle 1: *In a bureaucracy, a manager's formal authority derives from the position he or she holds in the organization.*

authority The power to hold people accountable for their actions and to make decisions concerning the use of organizational resources.

Authority is the power to hold people accountable for their actions and to make decisions concerning the use of organizational resources. Authority gives managers the right to direct and control their subordinates' behavior to achieve organizational goals. In a bureaucratic system of administration, obedience is owed to a manager not because of any personal qualities—such as personality, wealth, or social status—but because the manager occupies a position that is associated with a certain level of authority and responsibility.[26]

- Principle 2: *In a bureaucracy, people should occupy positions because of their performance, not because of their social standing or personal contacts.*

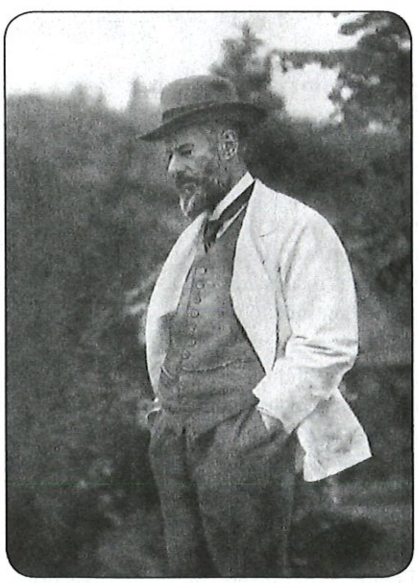
This principle was not always followed in Weber's time and is often ignored today. Some organizations and industries are still affected by social networks in which personal contacts and relations, not job-related skills, influence hiring and promotion decisions.

- Principle 3: *The extent of each position's formal authority and task responsibilities, and its relationship to other positions in an organization, should be clearly specified.*

When the tasks and authority associated with various positions in the organization are clearly specified, managers and workers know what is expected of them and what to expect from each other. Moreover, an organization can hold all its employees strictly accountable for their actions when they know their exact responsibilities.

- Principle 4: *Authority can be exercised effectively in an organization when positions are arranged hierarchically so employees know whom to report to and who reports to them.*[27]

Managers must create an organizational hierarchy of authority that makes it clear who reports to whom and to whom managers and workers should go if conflicts or problems arise. This principle is especially important in the armed forces, the FBI, the CIA, and other organizations that deal with sensitive issues involving possible major repercussions. It is vital that managers at high levels of the hierarchy be able to hold subordinates accountable for their actions.



Max Weber developed the principles of bureaucracy during Germany's burgeoning industrial revolution to help organizations increase their efficiency and effectiveness.

- Principle 5: *Managers must create a well-defined system of rules, standard operating procedures, and norms so they can effectively control behavior within an organization.*

rules Formal, written instructions that specify actions to be taken under different circumstances to achieve specific goals.

standard operating procedures (SOPs) Specific sets of written instructions about how to perform a certain aspect of a task.

norms Unwritten, informal codes of conduct that prescribe how people should act in particular situations and are considered important by most members of a group or an organization.

Rules are formal, written instructions that specify actions to be taken under different circumstances to achieve specific goals (for example, if A happens, do B). **Standard operating procedures (SOPs)** are specific sets of written instructions about how to perform a certain aspect of a task. A rule might state that at the end of the workday employees are to leave their machines in good order, and a set of SOPs would specify exactly how they should do so, itemizing which machine parts must be oiled or replaced. **Norms** are unwritten, informal codes of conduct that prescribe how people should act in particular situations and are considered important by most members of a group or an organization. For example, an organizational norm in a restaurant might be that waiters should help each other if time permits.

Rules, SOPs, and norms provide behavioral guidelines that increase the performance of a bureaucratic system because they specify the best ways to accomplish organizational tasks. Companies such as McDonald's and Walmart have developed extensive rules and procedures to specify the behaviors required of their employees, such as "Always greet the customer with a smile." For example, Walmart, the world's largest retailer, automatically tracks inventory levels of products at its stores. When inventory is too low, the retailer sends an automatic request to a supplier to purchase an item and have it shipped. These items are then routed as efficiently as possible to the store where they are needed. Thus, Walmart incorporates bureaucratic controls in its operations to make employees as efficient as possible.[28]

Weber believed organizations that implement all five principles establish a bureaucratic system that improves organizational performance. The specification of positions and the use of rules and SOPs to regulate how tasks are performed make it easier for managers to organize and control the work of subordinates. Similarly, fair and equitable selection and promotion systems improve managers' feelings of security, reduce stress, and encourage organizational members to act ethically and further promote the interests of the organization.[29]

If bureaucracies are not managed well, however, many problems can result. Sometimes managers allow rules and SOPs, "bureaucratic red tape," to become so cumbersome that decision making is slow and inefficient and organizations cannot change. When managers rely too much on rules to solve problems and not enough on their own skills and judgment, their behavior becomes inflexible. A key challenge for managers is to use bureaucratic principles to benefit, rather than harm, an organization.

Fayol's Principles of Management

Henri Fayol (1841–1925) was the CEO of Comambault Mining. Working at the same time as Weber, but independently, Fayol identified 14 principles (summarized in Table 2.1) that he believed essential to increasing the efficiency of the management process.[30] We discuss these principles in detail here because, although they were developed at the turn of the 20th century, they remain the bedrock on which much of recent management theory and research is based. In fact, as the "Management Insight" feature following this discussion suggests, modern writers, such as well-known management guru Jim Collins, continue to extol these principles.

DIVISION OF LABOR A champion of job specialization and the division of labor for reasons already mentioned, Fayol was nevertheless among the first to point out the downside of too much specialization: boredom—a state of mind likely to diminish product quality, worker initiative, and flexibility. As a result, Fayol advocated that workers be given more job duties to perform or be encouraged to assume more responsibility for work outcomes—a principle increasingly applied today in organizations that empower their workers. Modern grocery stores, like Publix, use division of labor in their operations. For example, in the bakery and deli, employees focus on creating cakes, pies, and ready-to-eat meals. In the meat section, a butcher provides fresh cuts of poultry and beef. In the produce section, workers place fresh vegetables and fruits. Shelf stockers ensure that store shelves have the products customers want. Finally, customer service employees help customers bag, purchase, and carry groceries out to their automobiles. By using division of labor, Publix employees are able to develop expertise they might not otherwise gain.[31]

Table 2.1

Fayol's 14 Principles of Management

Division of labor Job specialization and the division of labor should increase efficiency, especially if managers take steps to lessen workers' boredom.

Authority and responsibility Managers have the right to give orders and the power to exhort subordinates for obedience.

Unity of command An employee should receive orders from only one superior.

Line of authority The length of the chain of command that extends from the top to the bottom of an organization should be limited.

Centralization Authority should not be concentrated at the top of the chain of command.

Unity of direction The organization should have a single plan of action to guide managers and workers.

Equity All organizational members are entitled to be treated with justice and respect.

Order The arrangement of organizational positions should maximize organizational efficiency and provide employees with satisfying career opportunities.

Initiative Managers should allow employees to be innovative and creative.

Discipline Managers need to create a workforce that strives to achieve organizational goals.

Remuneration of personnel The system that managers use to reward employees should be equitable for both employees and the organization.

Stability of tenure of personnel Long-term employees develop skills that can improve organizational efficiency.

Subordination of individual interests to the common interest Employees should understand how their performance affects the performance of the whole organization.

Esprit de corps Managers should encourage the development of shared feelings of comradeship, enthusiasm, or devotion to a common cause.

AUTHORITY AND RESPONSIBILITY Like Weber, Fayol emphasized the importance of authority and responsibility. Fayol, however, went beyond Weber's formal authority, which derives from a manager's position in the hierarchy, to recognize the *informal* authority that derives from personal expertise, technical knowledge, moral worth, and the ability to lead and to generate commitment from subordinates. (The study of authority is the subject of recent research into leadership, discussed in Chapter 14.)

unity of command A reporting relationship in which an employee receives orders from, and reports to, only one superior.

UNITY OF COMMAND The principle of **unity of command** specifies that an employee should receive orders from, and report to, only one superior. Fayol believed that *dual command,* the reporting relationship that exists when two supervisors give orders to the same subordinate, should be avoided except in exceptional circumstances. Dual command confuses subordinates, undermines order and discipline, and creates havoc within the formal hierarchy of authority. Assessing any manager's authority and responsibility in a system of dual command is difficult, and the manager who is bypassed feels slighted and angry and may be uncooperative in the future. For example, the U.S. Army maintains unity of command for its soldiers. Clearly defined ranks range from private to five-star general, and each soldier answers to a commanding officer with a higher rank. While operating in the field, it is critical that soldiers understand their objectives, and consistent unity of command enables each soldier to know exactly whom he or she should follow to get the job done.[32]

line of authority The chain of command extending from the top to the bottom of an organization.

LINE OF AUTHORITY The **line of authority** is the chain of command extending from the top to the bottom of an organization. Fayol was one of the first management theorists to point out the importance of limiting the length of the chain of command by controlling the number of levels in the managerial hierarchy. The more levels in the hierarchy, the longer communication takes between managers at the top and bottom and the slower the pace of planning and organizing. Restricting the number of hierarchical levels to lessen these communication

problems lets an organization act quickly and flexibly; this is one reason for the recent trend toward restructuring (discussed in Chapter 1).

Fayol also pointed out that when organizations are split into different departments or functions, each with its own hierarchy, it is important to allow middle and first-line managers in each department to interact with managers at similar levels in other departments. This interaction helps speed decision making because managers know each other and know whom to go to when problems arise. For cross-departmental integration to work, Fayol noted the importance of keeping one's superiors informed about what is taking place so that lower-level decisions do not harm activities taking place in other parts of the organization. One alternative to cross-departmental integration is to create cross-departmental teams controlled by a team leader (see Chapter 1).

centralization The concentration of authority at the top of the managerial hierarchy.

CENTRALIZATION Fayol also was one of the first management writers to focus on **centralization**, the concentration of authority at the top of the managerial hierarchy. Fayol believed authority should not be concentrated at the top of the chain of command. One of the most significant issues that top managers face is how much authority to centralize at the top of the organization and what authority to decentralize to managers and workers at lower hierarchical levels. This important issue affects the behavior of people at all levels in the organization.

If authority is very centralized, only managers at the top make important decisions and subordinates simply follow orders. This arrangement gives top managers great control over organizational activities and helps ensure that the organization is pursuing its strategy, but it makes it difficult for the people who are closest to problems and issues to respond to them in a timely manner. It also can reduce the motivation of middle and first-line managers and make them less flexible and adaptable because they become reluctant to make decisions on their own, even when doing so is necessary. They get used to passing the buck. The pendulum is now swinging toward decentralization as organizations seek to empower middle managers and create self-managed teams that monitor and control their own activities, both to increase organizational flexibility and to reduce operating costs and increase efficiency. The U.S. Department of State is responsible for maintaining diplomatic relations between America and nearly 180 other nations. Although the Department of State operates embassies and consulates throughout the world, the secretary of state is based at its headquarters in Washington, DC, so that major policy decisions are centralized.[33]

unity of direction The singleness of purpose that makes possible the creation of one plan of action to guide managers and workers as they use organizational resources.

UNITY OF DIRECTION Just as there is a need for unity of command, there is also a need for **unity of direction**, the singleness of purpose that makes possible the creation of one plan of action to guide managers and workers as they use organizational resources. An organization without a single guiding plan becomes inefficient and ineffective; its activities become unfocused, and individuals and groups work at cross-purposes. Successful planning starts with top managers working as a team to craft the organization's strategy, which they communicate to middle managers, who decide how to use organizational resources to implement the strategy.

equity The justice, impartiality, and fairness to which all organizational members are entitled.

EQUITY As Fayol wrote, "For personnel to be encouraged to carry out their duties with all the devotion and loyalty of which they are capable, they must be treated with respect for their own sense of integrity, and equity results from the combination of respect and justice."[34] **Equity**—the justice, impartiality, and fairness to which all organizational members are entitled—is receiving much attention today; the desire to treat employees fairly is a primary concern of managers. (Equity theory is discussed in Chapter 13.)

order The methodical arrangement of positions to provide the organization with the greatest benefit and to provide employees with career opportunities.

ORDER Like Taylor and the Gilbreths, Fayol was interested in analyzing jobs, positions, and individuals to ensure that the organization was using resources as efficiently as possible. To Fayol, **order** meant the methodical arrangement of positions to provide the organization with the greatest benefit and to provide employees with career opportunities that satisfy their needs. Thus Fayol recommended the use of organizational charts to show the position and duties of each employee and to indicate which positions an employee might move to or be promoted into in the future. He also advocated that managers engage in extensive career

planning to help ensure orderly career paths. Career planning is of primary interest today as organizations increase the resources they are willing to devote to training and developing their workforces.

INITIATIVE Although order and equity are important means to fostering commitment and loyalty among employees, Fayol believed managers must also encourage employees to exercise **initiative**, the ability to act on their own without direction from a superior. Used properly, initiative can be a major source of strength for an organization because it leads to creativity and innovation. Managers need skill and tact to achieve the difficult balance between the organization's need for order and employees' desire for initiative. Fayol believed the ability to strike this balance was a key indicator of a superior manager.

initiative The ability to act on one's own without direction from a superior.

DISCIPLINE In focusing on the importance of **discipline**—obedience, energy, application, and other outward marks of respect for a superior's authority—Fayol was addressing the concern of many early managers: how to create a workforce that was reliable and hardworking and would strive to achieve organizational goals. According to Fayol, discipline results in respectful relationships between organizational members and reflects the quality of an organization's leadership and a manager's ability to act fairly and equitably.

discipline Obedience, energy, application, and other outward marks of respect for a superior's authority.

REMUNERATION OF PERSONNEL Fayol proposed reward systems including bonuses and profit-sharing plans, which are increasingly used today as organizations seek improved ways to motivate employees. Convinced from his own experience that an organization's payment system has important implications for organizational success, Fayol believed effective reward systems should be equitable for both employees and the organization, encourage productivity by rewarding well-directed effort, not be subject to abuse, and be uniformly applied to employees. PayScale Incorporated is a company dedicated to helping its clients effectively compensate their employees. The company works with highly competitive IT customers to track employee performance and effectively reward talent, increasing employee morale and productivity while reducing employee attrition.[35]

STABILITY OF TENURE OF PERSONNEL Fayol also recognized the importance of long-term employment, and this idea has been echoed by contemporary management gurus such as Tom Peters, Jeff Pfeffer, and Jim Collins. When employees stay with an organization for extended periods, they develop skills that improve the organization's ability to use its resources.

SUBORDINATION OF INDIVIDUAL INTERESTS TO THE COMMON INTEREST The interests of the organization as a whole must take precedence over the interests of any individual or group if the organization is to survive. Equitable agreements must be established between the organization and its members to ensure that employees are treated fairly and rewarded for their performance and to maintain the disciplined organizational relationships so vital to an efficient system of administration.

ESPRIT DE CORPS As this discussion of Fayol's ideas suggests, the appropriate design of an organization's hierarchy of authority and the right mix of order and discipline foster cooperation and commitment. Likewise, a key element in a successful organization is the development of **esprit de corps**, a French expression that refers to shared feelings of comradeship, enthusiasm, or devotion to a common cause among members of a group. Esprit de corps can result when managers encourage personal, verbal contact between managers and workers and encourage communication to solve problems and implement solutions. (Today the term *organizational culture* is used to refer to these shared feelings; this concept is discussed at length in Chapter 3.)

esprit de corps Shared feelings of comradeship, enthusiasm, or devotion to a common cause among members of a group.

Some of the principles that Fayol outlined have faded from contemporary management practices, but most have endured. The characteristics of successful organizations that Jim Collins presents in his best-selling book *Good to Great* (2001) are discussed in the accompanying "Management Insight."

MANAGEMENT INSIGHT

How to Get from *Good to Great*

In his book *Good to Great,* Jim Collins, noted consultant and business coach, reports on a case study of firms with exemplary performance. He is seeking to shed light on the factors that contributed to these firms' rise to excellence.[36] Collins says that several principles predict a firm's success.

The first is that of Level 5 leadership. These leaders possess great humility but also an intense professional will. Although Level 5 leadership is applicable to all levels of the organization, Collins proposes that its application only by top managers is enough to raise an organization from mediocrity to greatness.

Second, Collins argues that having the right people in place is more important than establishing the values and strategy of the firm. Firms should focus on hiring the right people, and getting rid of the wrong people, to move firms in an upward trajectory.

Third, Collins says that confrontation and conflict are important drivers of decision success. Thus it is critical for managers to establish a climate of trust where information can be readily shared. Furthermore, Collins asserts that attempting to motivate others is wrong because the right employees will be self-motivated—rewards may actually be counterproductive.

Fourth, Collins argues for the Hedgehog Principle, which says that companies should stick to what they know; companies should do what they can excel at, make money at, and be passionate about. Fifth, Collins says that great companies are disciplined companies. Here *discipline* means adhering to only those opportunities that accommodate the Hedgehog Principle. Opportunities that violate the Hedgehog Principle should be avoided.

Finally, *Good to Great* proposes that great companies do not chase technological fads but, instead, seek incremental improvements in technology that complement core businesses. According to Collins, great companies pursue incremental change and improvement instead of radical change.[37]

LO2-4 Trace the changes in theories about how managers should behave to motivate and control employees.

As this insight into contemporary management suggests, the basic concerns that motivated Fayol continue to inspire management theorists.[38] The principles that Fayol and Weber set forth still provide clear and appropriate guidelines that managers can use to create a work setting that efficiently and effectively uses organizational resources. These principles remain the bedrock of modern management theory; recent researchers have refined or developed them to suit modern conditions. For example, Weber's and Fayol's concerns for equity and for establishing appropriate links between performance and reward are central themes in contemporary theories of motivation and leadership.

Behavioral Management Theory

Because the writings of Weber and Fayol were not translated into English and published in the United States until the late 1940s, American management theorists in the first half of the 20th century were unaware of the contributions of these European pioneers. American management theorists began where Taylor and his followers left off. Although their writings were different, these theorists all espoused a theme that focused on **behavioral management**, the study of how managers should personally behave to motivate employees and encourage them to perform at high levels and be committed to achieving organizational goals.

behavioral management The study of how managers should behave to motivate employees and encourage them to perform at high levels and be committed to the achievement of organizational goals.

The Work of Mary Parker Follett

If F. W. Taylor is considered the father of management thought, Mary Parker Follett (1868–1933) serves as its mother.[39] Much of her writing about management and about the way managers should behave toward workers was a response to her concern that Taylor was


Mary Parker Follett, an early management thinker who advocated, "Authority should go with knowledge . . . whether it is up the line or down."

ignoring the human side of the organization. She pointed out that management often overlooks the multitude of ways in which employees can contribute to the organization when managers allow them to participate and exercise initiative in their everyday work lives.[40] Taylor, for example, never proposed that managers should involve workers in analyzing their jobs to identify better ways to perform tasks or should even ask workers how they felt about their jobs. Instead he used time-and-motion experts to analyze workers' jobs for them. Follett, in contrast, argued that because workers know the most about their jobs, they should be involved in job analysis and managers should allow them to participate in the work development process.

Follett proposed that "authority should go with knowledge . . . whether it is up the line or down." In other words, if workers have the relevant knowledge, then workers, rather than managers, should be in control of the work process itself, and managers should behave as coaches and facilitators—not as monitors and supervisors. In making this statement, Follett anticipated the current interest in self-managed teams and empowerment. She also recognized the importance of having managers in different departments communicate directly with each other to speed decision making. She advocated what she called "cross-functioning": members of different departments working together in cross-departmental teams to accomplish projects—an approach that is increasingly used today.[41]

Fayol also mentioned expertise and knowledge as important sources of managers' authority, but Follett went further. She proposed that knowledge and expertise, not managers' formal authority deriving from their position in the hierarchy, should decide who will lead at any particular moment. She believed, as do many management theorists today, that power is fluid and should flow to the person who can best help the organization achieve its goals. Follett took a horizontal view of power and authority, in contrast to Fayol, who saw the formal line of authority and vertical chain of command as being most essential to effective management. Follett's behavioral approach to management was very radical for its time.

The Hawthorne Studies and Human Relations

Probably because of its radical nature, Follett's work was unappreciated by managers and researchers until quite recently. Most continued to follow in the footsteps of Taylor and the Gilbreths. To increase efficiency, they studied ways to improve various characteristics of the work setting, such as job specialization or the kinds of tools workers used. One series of studies was conducted from 1924 to 1932 at the Hawthorne Works of the Western Electric Company.[42] This research, now known as the *Hawthorne studies,* began as an attempt to investigate how characteristics of the work setting—specifically, the level of lighting, or illumination—affect worker fatigue and performance. The researchers conducted an experiment in which they systematically measured worker productivity at various levels of illumination.

The experiment produced some unexpected results. The researchers found that regardless of whether they raised or lowered the level of illumination, productivity increased. In fact, productivity began to fall only when the level of illumination dropped to the level of moonlight—a level at which workers could presumably no longer see well enough to do their work efficiently.

The researchers found these results puzzling and invited a noted Harvard psychologist, Elton Mayo, to help them. Mayo proposed another series of experiments to solve the mystery. These experiments, known as the *relay assembly test experiments,* were designed to investigate the effects of other aspects of the work context on job performance, such as the effect of the number and length of rest periods and hours of work on fatigue and monotony.[43] The goal was to raise productivity.

During a two-year study of a small group of female workers, the researchers again observed that productivity increased over time, but the increases could not be solely attributed to the effects of changes in the work setting. Gradually, the researchers discovered that, to some degree, the results they were obtaining were influenced by the fact that the researchers

themselves had become part of the experiment. In other words, the presence of the researchers was affecting the results because the workers enjoyed receiving attention and being the subject of study and were willing to cooperate with the researchers to produce the results they believed the researchers desired.

Subsequently, it was found that many other factors also influence worker behavior, and it was not clear what was actually influencing the Hawthorne workers' behavior. However, this particular effect—which became known as the **Hawthorne effect**—seemed to suggest that workers' attitudes toward their managers affect the level of workers' performance. In particular, the significant finding was that each manager's personal behavior or leadership approach can affect performance. This finding led many researchers to turn their attention to managerial behavior and leadership. If supervisors could be trained to behave in ways that would elicit cooperative behavior from their subordinates, productivity could be increased. From this view emerged the **human relations movement**, which advocates that supervisors be behaviorally trained to manage subordinates in ways that elicit their cooperation and increase their productivity.

Hawthorne effect The finding that a manager's behavior or leadership approach can affect workers' level of performance.

human relations movement A management approach that advocates the idea that supervisors should receive behavioral training to manage subordinates in ways that elicit their cooperation and increase their productivity.

The importance of behavioral, or human relations, training became even clearer to its supporters after another series of experiments—the *bank wiring room experiments.* In a study of workers making telephone switching equipment, researchers Elton Mayo and F. J. Roethlisberger discovered that the workers, as a group, had deliberately adopted a norm of output restriction to protect their jobs. Workers who violated this informal production norm were subjected to sanctions by other group members. Those who violated group performance norms and performed above the norm were called "ratebusters"; those who performed below the norm were called "chiselers."

The experimenters concluded that both types of workers threatened the group as a whole. Ratebusters threatened group members because they revealed to managers how fast the work could be done. Chiselers were looked down on because they were not doing their share of the work. Work group members disciplined both ratebusters and chiselers to create a pace of work that the workers (not the managers) thought was fair. Thus, a work group's influence over output can be as great as the supervisors' influence. Because the work group can influence the behavior of its members, some management theorists argue that supervisors should be trained to behave in ways that gain the goodwill and cooperation of workers so that supervisors, not workers, control the level of work group performance.

One implication of the Hawthorne studies was that the behavior of managers and workers in the work setting is as important in explaining the level of performance as the technical aspects of the task. Managers must understand the workings of the **informal organization**, the system of behavioral rules and norms that emerge in a group, when they try to manage or change behavior in organizations. Many studies have found that as time passes, groups often develop elaborate procedures and norms that bond members together, allowing unified action either to cooperate with management to raise performance or to restrict output and thwart the attainment of organizational goals.[44] The Hawthorne studies demonstrated the importance of understanding how the feelings, thoughts, and behavior of work group members and managers affect performance. It was becoming increasingly clear to researchers that understanding behavior in organizations is a complex process that is critical to increasing performance.[45] Indeed, the increasing interest in the area of management known as **organizational behavior**, the study of the factors that have an impact on how individuals and groups respond to and act in organizations, dates from these early studies.

informal organization The system of behavioral rules and norms that emerge in a group.

organizational behavior The study of the factors that have an impact on how individuals and groups respond to and act in organizations.

Theory X and Theory Y

Several studies after World War II revealed how assumptions about workers' attitudes and behavior affect managers' behavior. Perhaps the most influential approach was developed by Douglas McGregor. He proposed two sets of assumptions about how work attitudes and behaviors not only dominate the way managers think but also affect how they behave in organizations. McGregor named these two contrasting sets of assumptions *Theory X* and *Theory Y* (see Figure 2.3).[46]

Theory X A set of negative assumptions about workers that leads to the conclusion that a manager's task is to supervise workers closely and control their behavior.

THEORY X According to the assumptions of **Theory X**, the average worker is lazy, dislikes work, and will try to do as little as possible. Moreover, workers have little ambition and wish to avoid responsibility. Thus, the manager's task is to counteract workers' natural

Figure 2.3
Theory X versus Theory Y

THEORY X	THEORY Y
The average employee is lazy, dislikes work, and will try to do as little as possible.	Employees are not inherently lazy. Given the chance, employees will do what is good for the organization.
To ensure that employees work hard, managers should closely supervise employees.	To allow employees to work in the organization's interest, managers must create a work setting that provides opportunities for workers to exercise initiative and self-direction.
Managers should create strict work rules and implement a well-defined system of rewards and punishments to control employees.	Managers should decentralize authority to employees and make sure employees have the resources necessary to achieve organizational goals.

Source: From D. McGregor, The Human Side of Enterprise. Copyright © McGraw-Hill Companies, Inc. Reprinted with permission.

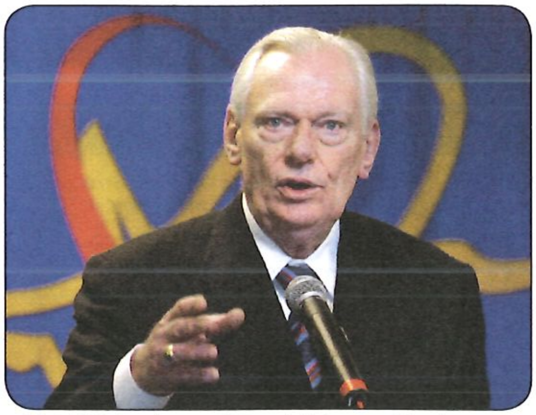
tendencies to avoid work. To keep workers' performance at a high level, the manager must supervise workers closely and control their behavior by means of "the carrot and stick"—rewards and punishments.

Managers who accept the assumptions of Theory X design and shape the work setting to maximize their control over workers' behaviors and minimize workers' control over the pace of work. These managers believe workers must be made to do what is necessary for the success of the organization, and they focus on developing rules, SOPs, and a well-defined system of rewards and punishments to control behavior. They see little point in giving workers autonomy to solve their own problems because they think the workforce neither expects nor desires cooperation. Theory X managers see their role as closely monitoring workers to ensure that they contribute to the production process and do not threaten product quality. Henry Ford, who closely supervised and managed his workforce, fits McGregor's description of a manager who holds Theory X assumptions.

Theory Y A set of positive assumptions about workers that leads to the conclusion that a manager's task is to create a work setting that encourages commitment to organizational goals and provides opportunities for workers to be imaginative and to exercise initiative and self-direction.

THEORY Y In contrast, **Theory Y** assumes that workers are not inherently lazy, do not naturally dislike work, and, if given the opportunity, will do what is good for the organization. According to Theory Y, the characteristics of the work setting determine whether workers consider work to be a source of satisfaction or punishment, and managers do not need to closely control workers' behavior to make them perform at a high level because workers exercise self-control when they are committed to organizational goals. The implication of Theory Y, according to McGregor, is that "the limits of collaboration in the organizational setting are not limits of human nature but of management's ingenuity in discovering how to realize the potential represented by its human resources."[47] It is the manager's task to create a work setting that encourages commitment to organizational goals and provides opportunities for workers to be imaginative and to exercise initiative and self-direction.

When managers design the organizational setting to reflect the assumptions about attitudes and behavior suggested by Theory Y, the characteristics of the organization are quite different from those of an organizational setting based on Theory X. Managers who believe workers are motivated to help the organization reach its goals can decentralize authority and give more control over the job to workers, both as individuals and in groups. In this setting, individuals and groups are still accountable for their activities; however, the manager's role is not to control employees but to provide support and advice, to make sure employees have the resources they need to perform their jobs, and to evaluate them on their ability to help the organization meet its goals. Henri Fayol's approach to administration more closely reflects the assumptions of Theory Y rather than Theory X. Companies such as 3M, Apple, and Google exemplify those that follow Theory Y.



Herb Kelleher, former CEO and chairman of Southwest Airlines, built a company known for customer service by following an open-door policy and giving employees flexible job descriptions and significant discretion in interacting with customers.

Southwest Airlines has long been the darling of the airline industry, and Southwest's leadership cites their Theory Y culture as a driving force. Inspired by former CEO and Chairman Herb Kelleher, Southwest Airlines emphasizes a culture of fun, creativity, and camaraderie.[48] Southwest employees note how Kelleher maintained an open-door policy of contact, which enabled him to stay in touch with problems facing the airline and find solutions faster.

Employees have highly flexible job descriptions that enable them to chip in and help where needed. Unlike many of its competitors, which use highly regimented and formalized employee roles, Southwest employees are encouraged to help solve problems where they see them. Thus, it's not uncommon to see a Southwest manager helping move passenger luggage into aircraft or check in passengers at a gate.

Southwest also gives its employees significant discretion, enabling them to solve problems quickly. In an industry dominated by tight schedules and narrow windows to resolve problems, these actions enable employees to serve customers better.

Finally, Southwest Airlines views its unions as partners rather than adversaries. It works with independent unions to ensure that employees are compensated and treated fairly, and it routinely solicits input from its employees on how to improve operations.[49] As a result of this innovative culture dominated by Theory Y thinking, Southwest Airlines has become the most consistently profitable company among its U.S. competitors.

Management Science Theory

LO2-5 Explain the contributions of management science to the efficient use of organizational resources.

management science theory An approach to management that uses rigorous quantitative techniques to help managers make maximum use of organizational resources.

Management science theory is a contemporary approach to management that focuses on the use of rigorous quantitative techniques to help managers make maximum use of organizational resources to produce goods and services. In essence, management science theory is a contemporary extension of scientific management, which, as developed by Taylor, also took a quantitative approach to measuring the worker–task mix to raise efficiency. There are many branches of management science, and IT, which is having a significant impact on all kinds of management practices, is affecting the tools managers use to make decisions.[50] Each branch of management science deals with a specific set of concerns:

- *Quantitative management* uses mathematical techniques—such as linear and nonlinear programming, modeling, simulation, queuing theory, and chaos theory—to help managers decide, for example, how much inventory to hold at different times of the year, where to locate a new factory, and how best to invest an organization's financial capital. IT offers managers new and improved ways of handling information so they can make more accurate assessments of the situation and better decisions.
- *Operations management* gives managers a set of techniques they can use to analyze any aspect of an organization's production system to increase efficiency. IT, through the Internet and through growing B2B networks, is transforming how managers acquire inputs and dispose of finished products.
- *Total quality management (TQM)* focuses on analyzing an organization's input, conversion, and output activities to increase product quality.[51] Once again, through sophisticated software packages and computer-controlled production, IT is changing how managers and employees think about the work process and ways of improving it.
- *Management information systems (MISs)* give managers information about events occurring inside the organization as well as in its external environment—information that is vital for effective decision making. IT gives managers access to more and better information and allows more managers at all levels to participate in the decision-making process.

All these subfields of management science, enhanced by sophisticated IT, provide tools and techniques that managers can use to help improve the quality of their decision making and increase efficiency and effectiveness. For example, Toyota applied management science theory with its "Toyota Production System (TPS)." The TPS emphasizes continuous improvement in quality and the reduction of waste through learning. TPS was a major catalyst for the "lean revolution" in global manufacturing, and manufacturing companies worldwide have embraced this philosophy and adapted it for their own operations.[52] We discuss many important developments in management science theory in this book. In particular, Chapter 9 focuses on how to use operations management and TQM to improve quality, efficiency, and responsiveness to customers. And Chapter 18 describes the many ways managers use information systems and technologies to improve their planning, organizing, and controlling functions.

Organizational Environment Theory

LO2-6 Explain why the study of the external environment and its impact on an organization has become a central issue in management thought.

An important milestone in the history of management thought occurred when researchers went beyond the study of how managers can influence behavior within organizations to consider how managers control the organization's relationship with its external environment, or **organizational environment**—the set of forces and conditions that operate beyond an organization's boundaries but affect a manager's ability to acquire and utilize resources. Resources in the organizational environment include the raw materials and skilled people that an organization requires to produce goods and services, as well as the support of groups, including customers who buy these goods and services and provide the organization with financial resources. One way of determining the relative success of an organization is to consider how effective its managers are at obtaining scarce and valuable resources.[53] The importance of studying the environment became clear after the development of open-systems theory and contingency theory during the 1960s.

organizational environment The set of forces and conditions that operate beyond an organization's boundaries but affect a manager's ability to acquire and utilize resources.

The Open-Systems View

One of the most influential views of how an organization is affected by its external environment was developed by Daniel Katz, Robert Kahn, and James Thompson in the 1960s.[54] These theorists viewed the organization as an **open system**—a system that takes in resources from its external environment and converts or transforms them into goods and services that are sent back to that environment, where they are bought by customers (see Figure 2.4).

open system A system that takes in resources from its external environment and converts them into goods and services that are then sent back to that environment for purchase by customers.

At the *input stage* an organization acquires resources such as raw materials, money, and skilled workers to produce goods and services. Once the organization has gathered the necessary resources, conversion begins. At the *conversion stage* the organization's workforce, using appropriate tools, techniques, and machinery, transforms the inputs into outputs of finished goods and services such as cars, hamburgers, or flights to Hawaii. At the *output stage* the organization releases finished goods and services to its external environment, where customers purchase and use them to satisfy their needs. The money the organization obtains from the sales of its outputs allows the organization to acquire more resources so the cycle can begin again.

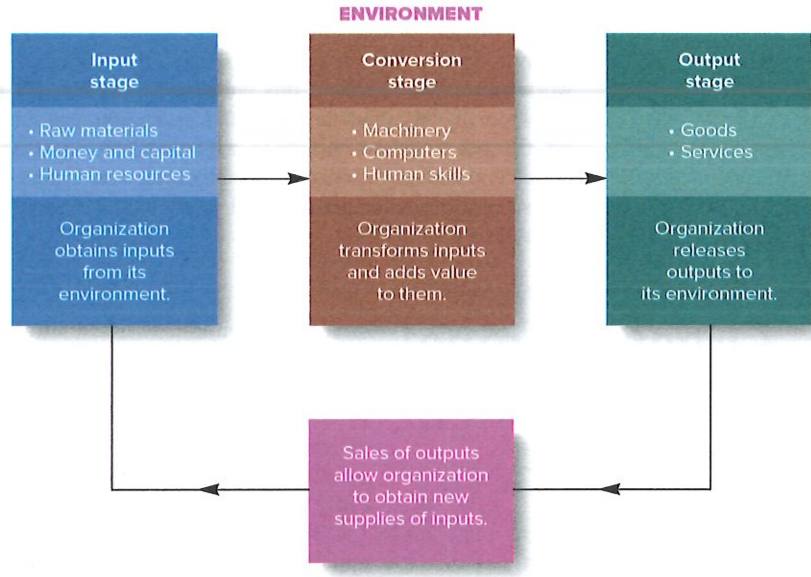
The system just described is said to be open because the organization draws from and interacts with the external environment in order to survive; in other words, the organization is open to its environment. A **closed system**, in contrast, is a self-contained system that is not affected by changes in its external environment. Organizations that operate as closed systems, that ignore the external environment, and that fail to acquire inputs are likely to experience **entropy**, which is the tendency of a closed system to lose its ability to control itself and thus to dissolve and disintegrate.

closed system A system that is self-contained and thus not affected by changes occurring in its external environment.

entropy The tendency of a closed system to lose its ability to control itself and thus to dissolve and disintegrate.

Management theorists can model the activities of most organizations by using the open-systems view. For example, manufacturing companies, like Ford and General Electric, buy inputs such as component parts, skilled and semiskilled labor, and robots and computer-controlled manufacturing equipment; then at the conversion stage they use their

Figure 2.4
The Organization as an Open System



manufacturing skills to assemble inputs into outputs of cars and appliances. As we discuss in later chapters, competition between organizations for resources is one of several major challenges to managing the organizational environment.

Researchers using the open-systems view are also interested in how the various parts of a system work together to promote efficiency and effectiveness. Systems theorists like to argue that the whole is greater than the sum of its parts; they mean that an organization performs at a higher level when its departments work together rather than separately. **Synergy**, the performance gains that result from the *combined* actions of individuals and departments, is possible only in an organized system. The recent interest in using teams combined or composed of people from different departments reflects systems theorists' interest in designing organizational systems to create synergy and thus increase efficiency and effectiveness.

synergy Performance gains that result when individuals and departments coordinate their actions.

Contingency Theory

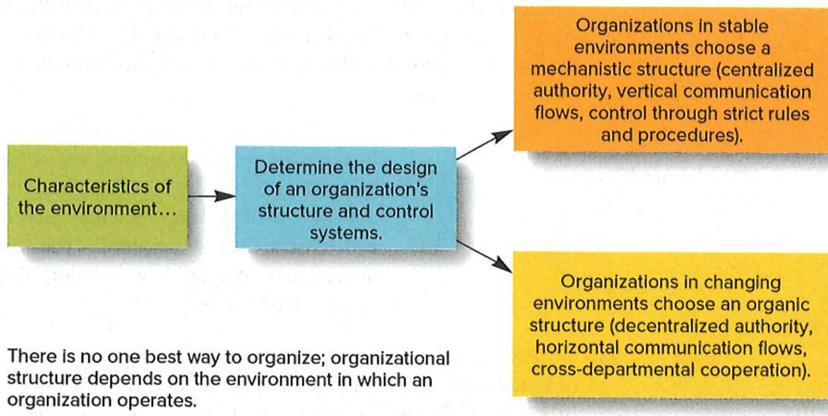
contingency theory The idea that the organizational structures and control systems managers choose depend on (are contingent on) characteristics of the external environment in which the organization operates.

Another milestone in management theory was the development of **contingency theory** in the 1960s by Tom Burns and G. M. Stalker in Britain and Paul Lawrence and Jay Lorsch in the United States.[55] The crucial message of contingency theory is that *there is no one best way to organize:* The organizational structures and the control systems that managers choose depend on (are contingent on) characteristics of the external environment in which the organization operates. According to contingency theory, the characteristics of the environment affect an organization's ability to obtain resources; to maximize the likelihood of gaining access to resources, managers must allow an organization's departments to organize and control their activities in ways most likely to allow them to obtain resources, given the constraints of the environment they face. In other words, how managers design the organizational hierarchy, choose a control system, and lead and motivate their employees is contingent on the characteristics of the organizational environment (see Figure 2.5).

An important characteristic of the external environment that affects an organization's ability to obtain resources is the degree to which the environment is changing. Changes in the organizational environment include changes in technology, which can lead to the creation of new products (such as Apple TV) and result in the obsolescence of existing products (Blu-ray players); the entry of new competitors (such as foreign organizations that compete for available resources); and unstable economic conditions. In general, the more quickly the

Figure 2.5

Contingency Theory of Organizational Design



There is no one best way to organize; organizational structure depends on the environment in which an organization operates.

organizational environment is changing, the greater are the problems associated with gaining access to resources, and the greater is managers' need to find ways to coordinate the activities of people in different departments to respond to the environment quickly and effectively.

MECHANISTIC AND ORGANIC STRUCTURES Drawing on Weber's and Fayol's principles of organization and management, Burns and Stalker proposed two basic ways in which managers can organize and control an organization's activities to respond to characteristics of its external environment: They can use a *mechanistic structure* or an *organic structure*.[56] As you will see, a mechanistic structure typically rests on Theory X assumptions, and an organic structure typically rests on Theory Y assumptions.

mechanistic structure An organizational structure in which authority is centralized, tasks and rules are clearly specified, and employees are closely supervised.

When the environment surrounding an organization is stable, managers tend to choose a mechanistic structure to organize and control activities and make employee behavior predictable. In a **mechanistic structure**, authority is centralized at the top of the managerial hierarchy, and the vertical hierarchy of authority is the main means used to control subordinates' behavior. Tasks and roles are clearly specified, subordinates are closely supervised, and the emphasis is on strict discipline and order. Everyone knows his or her place, and there is a place for everyone. A mechanistic structure provides the most efficient way to operate in a stable environment because it allows managers to obtain inputs at the lowest cost, giving an organization the most control over its conversion processes and enabling the most efficient production of goods and services with the smallest expenditure of resources. McDonald's restaurants operate with a mechanistic structure. Supervisors make all important decisions; employees are closely supervised and follow well-defined rules and standard operating procedures.

organic structure An organizational structure in which authority is decentralized to middle and first-line managers and tasks and roles are left ambiguous to encourage employees to cooperate and respond quickly to the unexpected.

In contrast, when the environment is changing rapidly, it is difficult to obtain access to resources, and managers need to organize their activities in a way that allows them to cooperate, to act quickly to acquire resources (such as new types of inputs to produce new kinds of products), and to respond effectively to the unexpected. In an **organic structure**, authority is decentralized to middle and first-line managers to encourage them to take responsibility and act quickly to pursue scarce resources. Departments are encouraged to take a cross-departmental or functional perspective, and cross-functional teams composed of people from different departments are formed. As in Mary Parker Follett's model, the organization operates in an organic way because authority rests with the individuals, departments, and teams best positioned to control the current problems the organization is facing. As a result, managers in an organic structure can react more quickly to a changing environment than can managers in a mechanistic structure. However, an organic structure is generally more expensive to operate because it requires that more managerial time, money, and effort be spent on coordination. So it is used only when needed—when the organizational environment is unstable and changing rapidly.[57] Google, Apple, and IBM are examples of companies that operate with organic structures. For

example, at Apple, all employees have the opportunity to provide and receive feedback from management, and even junior-level designers receive input from Apple executives. By using an organic managerial structure, Apple is able to clarify exactly what is expected of employees and to ensure that its employees are making needed progress on the company's objectives. Apple's management is also able to stay abreast of technological developments and changing competitive conditions that bear on the company's products and services.[58]

Summary and Review

In this chapter we examined the evolution of management theory and research over the last century. Much of the material in the rest of this book stems from developments and refinements of this work. Indeed, the rest of this book incorporates the results of the extensive research in management that has been conducted since the development of the theories discussed here.

LO2-1, 2-2 **SCIENTIFIC MANAGEMENT THEORY** The search for efficiency started with the study of how managers could improve person–task relationships to increase efficiency. The concept of job specialization and division of labor remains the basis for the design of work settings in modern organizations. New developments such as lean production and total quality management are often viewed as advances on the early scientific management principles developed by Taylor and the Gilbreths.

LO2-3 **ADMINISTRATIVE MANAGEMENT THEORY** Max Weber and Henri Fayol outlined principles of bureaucracy and administration that are as relevant to managers today as they were when developed at the turn of the 20th century. Much of modern management research refines these principles to suit contemporary conditions. For example, the use of cross-departmental teams and the empowerment of workers are issues that managers also faced a century ago.

LO2-4 **BEHAVIORAL MANAGEMENT THEORY** Researchers have described many different approaches to managerial behavior, including Theories X and Y. Often the managerial behavior that researchers suggest reflects the context of their own historical eras and cultures. Mary Parker Follett advocated managerial behaviors that did not reflect accepted modes of managerial behavior at the time, and her work was largely ignored until conditions changed.

LO2-5 **MANAGEMENT SCIENCE THEORY** The various branches of management science theory provide rigorous quantitative techniques that give managers more control over each organization's use of resources to produce goods and services.

LO2-6 **ORGANIZATIONAL ENVIRONMENT THEORY** The importance of studying the organization's external environment became clear after the development of open-systems theory and contingency theory during the 1960s. A main focus of contemporary management research is to find methods to help managers improve how they use organizational resources and compete in the global environment. Strategic management and total quality management are two important approaches intended to help managers make better use of organizational resources.

Management in Action

Topics for Discussion and Action

Discussion

1. Choose a fast-food restaurant, a department store, or some other organization with which you are familiar, and describe the division of labor and job specialization it uses to produce goods and services. How might this division of labor be improved? [LO2-1, 2-2]
2. Apply Taylor's principles of scientific management to improve the performance of the organization you chose in topic 1. [LO2-2]
3. In what ways are Weber's and Fayol's ideas about bureaucracy and administration similar? How do they differ? [LO2-3]
4. Which of Weber's and Fayol's principles seem most relevant to the creation of an ethical organization? [LO2-4, 2-6]
5. How are companies using management science theory to improve their processes? Is this theory equally applicable for manufacturing and service companies? If so, how? [LO2-4, 2-5]
6. What is contingency theory? What kinds of organizations familiar to you have been successful or unsuccessful in dealing with contingencies from the external environment? [LO2-6]
7. Why are mechanistic and organic structures suited to different organizational environments? [LO2-4, 2-6]

Action

8. Question a manager about his or her views of the relative importance of Fayol's 14 principles of management. [LO2-3, 2-4]
9. Visit at least two organizations in your community, and identify those that seem to operate with a Theory X or a Theory Y approach to management. [LO2-4]

Building Management Skills

Managing Your Own Business [LO2-2, 2-4]

Now that you understand the concerns addressed by management thinkers over the last century, use this exercise to apply your knowledge to developing your management skills.

Imagine that you are the founding entrepreneur of a software company that specializes in developing games for mobile devices. Customer demand for your games has increased so much that over the last year your company has grown from a busy one-person operation to one with 16 employees. In addition to yourself, you employ six software developers to produce the software, three graphic artists, two computer technicians, two marketing and sales personnel, and two assistants. In the next year you expect to hire 30 new employees, and you are wondering how best to manage your growing company.

1. Use the principles of Weber and Fayol to decide on the system of organization and management that you think will be most effective for your growing organization. How many levels will the managerial hierarchy of your organization have? How much authority will you decentralize to your subordinates? How will you establish the division of labor between subordinates? Will your subordinates work alone and report to you or work in teams?
2. Which management approach (for example, Theory X or Y) do you propose to use to run your organization? In 50 or fewer words, write a statement describing the management approach you believe will motivate and coordinate your subordinates, and tell why you think this style will be best.

Managing Ethically [LO2-3, 2-4]

How Unethical Behavior Shut Down a Meatpacking Plant

By all appearances the Westland/Hallmark Meat Co. based in Chico, California, was considered to be an efficient and sanitary meatpacking plant. Under the control of its owner and CEO, Steven Mendell, the plant regularly passed inspections by the U.S. Dept. of Agriculture (USDA). Over 200 workers were employed to slaughter cattle and prepare the beef for shipment to fast-food restaurants such as Burger King and Taco Bell. Also, millions of pounds of meat the plant produced yearly were delivered under contract to one of the federal government's most coveted accounts: the National School Lunch Program.[59]

When the Humane Society turned over a videotape (secretly filmed by one of its investigators, who had taken a job as a plant employee) to the San Bernardino County district attorney, showing major violations of health procedures, an uproar followed. The videotape showed two workers dragging sick cows up the ramp that led to the slaughterhouse using metal chains and forklifts, and shocking them with electric prods and shooting streams of water in their noses and faces. Not only did the tape show inhumane treatment of animals, but it also provided evidence that the company was flouting the ban on allowing sick animals to enter the food supply chain—something that federal regulations explicitly outlaw because of concerns for human health and safety.

Once the USDA was informed that potentially contaminated beef products had entered the supply chain—especially the one to the nation's schools—it issued a notice for the recall of the 143 million pounds of beef processed in the plant over the last two years, the largest recall in history. In addition, the plant was shut down as the investigation proceeded. CEO Steven Mendell was subpoenaed to appear before the House Panel on Energy and Commerce Committee. He denied that these violations had taken place and that diseased cows had entered the food chain. However, when panel members demanded that he view the videotape, which he claimed he had not seen, he was forced to acknowledge that inhumane treatment of animals had occurred.[60] Moreover, federal investigators turned up evidence that as early as 1996 the plant had been cited for overuse of electric prods to speed cattle through the plant and had been cited for other violations since, suggesting that these abuses had been going on for a long period.

Not only were consumers and schoolchildren harmed by these unethical actions, but the plant itself was permanently shut down and all 220 workers lost their jobs. In addition, the employees directly implicated in the video were prosecuted and one, who pleaded guilty to animal abuse, was convicted and sentenced to six months' imprisonment.[61] Clearly, all the people and groups affected by the meatpacking plant have suffered from its unethical and inhumane organizational behaviors and practices.

Questions

1. Use the theories discussed in the chapter to debate the ethical issues involved in the way the Westland/Hallmark Meat Co. business operated.
2. Use theories to discuss the ethical issues involved in the way the meatpacking business is being conducted today.
3. Search the web for changes occurring in the meatpacking business.

Small Group Breakout Exercise [LO2-6]

Modeling an Open System

Form groups of three to five people, and appoint one group member as the spokesperson who will communicate your findings to the class when called on by the instructor. Then discuss the following scenario:

Think of an organization with which you are all familiar, such as a local restaurant, store, or bank. After choosing an organization, model it from an open-systems perspective. Identify its input, conversion, and output processes, and identify forces in the external environment that help or hurt the organization's ability to obtain resources and dispose of its goods or services.

Exploring the World Wide Web [LO2-3, 2-6]

Explore General Electric's corporate history by reviewing the innovation timeline at http://www.ge.com/transformation, and then answer the following questions:

1. What do you think precipitated General Electric's growth strategy based on merger and acquisition?
2. How were early acquisitions and mergers related to one another?
3. What are some of the challenges faced by GE's current leadership team?

Be the Manager [LO2-2, 2-4]

How to Manage a Hotel

You have been called in to advise the owners of an exclusive new luxury hotel. For the venture to succeed, hotel employees must focus on providing customers with the highest-quality customer service possible. The challenge is to devise a way of organizing and controlling employees that will promote high-quality service, that will encourage employees to be committed to the hotel, and that will reduce the level of employee turnover and absenteeism—which are typically high in the hotel business.

Questions

1. How do the various management theories discussed in this chapter offer clues for organizing and controlling hotel employees?
2. Which parts would be the most important for an effective system to organize and control employees?

Bloomberg Case in the News [LO 2-1, 2-3, 2-4, 2-6]

Welcome, Olympic Tourists, to Brazil. Please Don't Mind the Mess

When Rio de Janeiro won the rights in 2009 to host the Olympics, Brazil planned a blitz of projects to showcase just how far it had risen. But when tourists start showing up in two months to attend the games, it'll be the bust and not Brazil's best that'll be on display.

That sewage-filled harbor that visitors will pass on the way from the airport—and the spot where Olympic sailing events will be staged—was supposed to be a shimmering, clean bay. That new metro line they'll take from the posh Ipanema beach neighborhood to the games will at best run on a limited schedule, having started operations just four days before the opening ceremony. And what about the state-of-the-art gear that police were supposed to get to help keep travelers safe? A top official says it never happened.

Welcome to Brazil, a land of political, economic and fiscal crisis.

"When you look back at the bid documents from 2009, the Olympics were definitely designed and pitched as a way of showcasing Brazil as this thriving democracy and burgeoning economy," said Jules Boykoff, the author of a book on Olympics history that's critical about the legacy of major sporting events. "How big a difference seven years make."

To be fair, most of the 39 billion reals ($11 billion) in arenas and infrastructure being built ahead of the Olympics will be ready in time and, besides a few eyesores and commuting delays, most tourists may not even notice all that should have been. But the unfinished work is an indication of a much bigger problem that will last long after the visitors jet out: Rio state is all but broke.

No one knows that better than Joao Vitor da Silva and his father, Rodrigo da Silva. The scrawny nine-year-old in an Iron Man T-shirt is a hemophiliac, and Batista said they've been warned that public-health spending cuts may disrupt supplies of prophylaxis, the shots that prevent Joao from bleeding out whenever he's injured or sick.

"If there's money for the Olympics, there has to be money for health," said Da Silva, a 34-year-old former forklift-operator who's on medical leave.

Brazil's hardly the first nation to host the Olympics games from a hotbed of chaos. (Russia, Mexico and South Korea are all part of the club.)

Even so, the tumultuous backdrop when the games begin Aug. 5 is a far cry from the image of the up-and-coming powerhouse organizers had envisioned when hosting rights were awarded.

These days, Brazil is stuck in a crushing recession and Lula's successor, Dilma Rousseff, was stripped of power while she faces an impeachment trial on allegations she illegally financed budget deficits. Rio state missed debt payments last month and is delaying public-worker salaries after oil prices collapsed, a primary source of revenue. And at least six companies contracted for Olympic projects and related infrastructure have been crippled by allegations they paid kickbacks to win lucrative public-works deals.

Three of those companies—builders Queiroz Galvao SA, OAS SA, and Andrade Gutierrez SA—were responsible for a project to dredge four polluted lagoons and plant 500,000 mangrove trees in Barra da Tijuca, the key staging ground for the games. But work won't be ready after public prosecutors requested delays and then the state faced cash shortages, according to the Environment Secretariat. A press official for the builders group confirmed that the pace of work has been "reduced" and declined to comment further.

"Rio is the showcase of Brazil—of its incompetence and impunity," said Mario Moscatelli, the biologist subcontracted by the construction firms to plant the mangroves. He says he'll be able to finish less than 10 percent of the work.

Queiroz is also part of the group building the subway line from Ipanema to Barra, which still awaits a nearly 1 billion-real loan from the Rio-based national development bank before it can finish works.

Rio state projects a 20 billion-real deficit this year, of which 12 billion relate to the underwater pension system, and Thursday announced a new round of spending cuts. Almost 70 percent of public-school teachers and workers have been on strike since March as salaries are delayed, their union says. Rio city was forced to take control of two public hospitals, and a doctors' group warns others may soon close for lack of funding.

The state also slashed its security budget by 32 percent this year and has delayed payments to police and their families. New equipment police expected for the games never materialized, and instead many officers are saddled with obsolete gear, said a high-ranking military police official, who asked not to be identified criticizing the budget cuts.

All major security investments for the Olympics have been carried out since 2012 or are in their final phase, and any personnel or equipment shortage during the games will be covered by federal security agencies, according to the press office of Rio's security secretariat.

Leonardo Espindola, chief of staff to Rio's governor, told the Supreme Court in April that the state is on the verge of "social collapse." State Finance Secretary Julio Bueno agrees. At the outset of an hour-long interview last month, Bueno claimed to have "the worst job in Rio de Janeiro."

"We're unable to maintain essential services like police and health," he said. "That's what defines the health of a society."

Source: Biller, David L., "Welcome, Olympic Tourists, to Brazil. Please Don't Mind the Mess," *Bloomberg*, June 13, 2016. Used with permission of Bloomberg.

Questions for Discussion

1. Describe how the contingency theory of management would help or hinder Brazilian officials with getting the country ready to host the Olympic Games.
2. Do you consider Brazil's approach to managing the Olympics a closed or open system? Explain your answer.
3. Would a management science theory approach to staging the Olympics ensure success? Why or why not?

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