Chapter two

The Evolution of Management Theory

Learning Objectives

1. Describe how the need to increase organizational efficiency and effectiveness has guided the evolution of management theory.
2. Explain the principle of job specialization and division of labour, and tell why the study of person–task relationships is central to the pursuit of increased efficiency.
3. Identify the principles of administration and organization that underlie effective organizations.
4. Trace the changes that have occurred in theories about how managers should behave in order to motivate and control employees.
5. Explain the contributions of management science to the efficient use of organizational resources.
6. Explain why the study of the external environment and its impact on an organization has become a central issue in management thought.

A Case in Contrast

Changing Ways of Making Cars

Car production has changed dramatically over the years as managers have applied different views or philosophies of management to organize and control work activities. Prior to 1900, workers worked in small groups, cooperating to hand-build cars with parts that often had to be altered and modified to fit together. This system, a type of small-batch production, was very expensive; assembling just one car took considerable time and effort; and workers could produce only a few cars in a day. To reduce costs and sell more cars, managers of early car companies needed better techniques to increase efficiency.

Henry Ford revolutionized the car industry. In 1913, Ford opened the Highland Park car plant in Detroit to produce the Model T. Ford and his team of manufacturing managers pioneered the development of mass-production manufacturing, a system that made the small-batch system almost obsolete overnight. In mass production, moving conveyor belts bring the car to the workers.

Each individual worker performs a single assigned task along a production line, and the speed of the conveyor belt is the primary means of controlling their activities. Ford experimented to discover the most efficient way for each individual worker to perform an assigned task. The result was that each worker performed one

This photo, taken in 1904 inside Daimler Motor Co., is an example of the use of small-batch production, a production system in which small groups of people work together and perform all the tasks needed to assemble a product.

In 1913, Henry Ford revolutionized the production process of a car by pioneering mass-production manufacturing, a production system in which a conveyor belt brings each car to the workers, and each individual worker performs a single task along the production line. Even today, cars are built using this system, as shown in this photo of workers along a computerized automobile assembly line.

specialized task, such as bolting on the door or attaching the door handle, and jobs in the Ford car plant became very repetitive.[1]

Ford's management approach increased efficiency and reduced costs so much that by 1920 he was able to reduce the price of a car by two-thirds and sell over two million cars a year.[2] Ford Motor Company (www.ford.com) became the leading car company in the world, and many competitors rushed to adopt the new mass-production techniques. Two of these companies, General Motors (GM) (www.gm.com) and Chrysler (www.chryslercorp.com), eventually emerged as Ford's major competitors.

The CEOs of GM and Chrysler—Alfred Sloan and Walter Chrysler—went beyond simple imitation of the Ford approach by adopting a new strategy: offering customers a wide variety of cars to choose from. To keep costs low, Henry Ford had offered customers only one car—the Model T. The new strategy of offering a wide range of models was so popular that Ford was eventually forced to close his factory for seven months in order to reorganize his manufacturing system to widen his product range. Due to his limited vision of the changing car market, his company lost its competitive advantage. During the early 1930s, GM became the market leader.

The next revolution in car production took place not in the United States but in Japan. A change in management thinking occurred there when Ohno Taiichi, a Toyota production engineer, pioneered the development of lean manufacturing in the 1960s after touring the US plants of the Big Three car companies. The management philosophy behind lean manufacturing is to continuously find methods to improve the efficiency of the production process in order to reduce costs, increase quality, and reduce car assembly time.

In lean manufacturing, workers work on a moving production line, but they are organized into small teams, each of which is responsible for a particular phase of car assembly, such as installing the car's transmission or electrical wiring system. Each team member is expected to learn all the tasks of all members of his or her team, and each work group is charged with the responsibility not only to assemble cars but also to continuously find ways to increase quality and reduce costs. By 1970, Japanese managers had applied the new lean production system so efficiently that they were producing higher-quality cars at lower prices than their US counterparts, and by 1980 Japanese companies were dominating the global car market.

To compete with the Japanese, managers at the Big Three car makers visited Japan to learn lean production methods. In recent years, Chrysler Canada has been the North American model for speed in automobile production. Chrysler's Windsor, Ontario assembly plant opened in 1928, and over 54 years built its first five million vehicles. Less than 11 years later, in 1994, the plant reached the eight-million mark.[3]

Chrysler's Windsor facility has made a reputation for itself as "the biggest single experiment with flexible manufacturing methods at one site."[4] In the last 20 years, the plant has been so successful that Ken Lewenza, president of Local 444 of the Canadian Auto Workers, describes it as "Chrysler's high-pressure plant, always expected to meet peak demand for the firm's most popular products."[5] On July 24, 2000, the plant reopened its doors after being shut down for just two weeks to retool for the newest generation of DaimlerChrysler AG minivans, due in dealers' showrooms a month later. That was by far Windsor's quickest turnover, but flexible manufacturing procedures introduced in 1983 have enabled the plant to display North America's speediest production turnovers. In 1982–83, the plant shut down for 16 weeks to retool from making sedans to the first models of the Chrysler minivan, and then in 1995, it closed for 12 weeks for retooling to produce the next generation of minivans.

Canadian Auto Workers
www.caw.ca/

While the Windsor facility has been a model for quick turnarounds, Canada's auto industry in general has fared well with the advancements in lean production methods. One analyst suggested that Canada is "in the golden era of the auto sector in Canada," with a chance to outpace Michigan as early as 2001.[6]

Overview

As this sketch of the evolution of global car manufacturing suggests, changes in management practices occur as managers, theorists, researchers, and consultants seek new ways to increase organizational efficiency and effectiveness. The driving force behind the evolution of management theory is the search for better ways to utilize organizational resources. Advances in management theory 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.

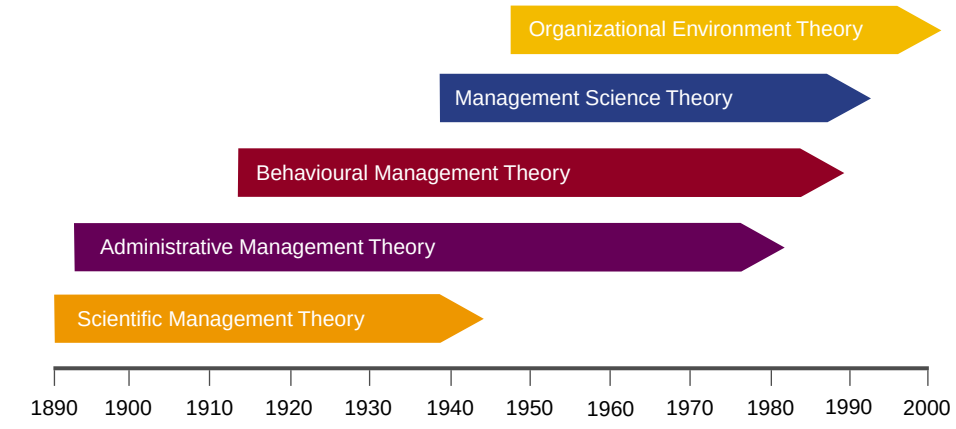
In this chapter, we examine how management theory concerning appropriate management practices has evolved in modern times, and look at the central concerns that have guided its development. First, we examine the so-called classical management theories that emerged around the turn of the twentieth century. 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 behavioural management theories, developed both before and after the Second World War, which focus on how managers should lead and control their workforces to increase performance. Then we discuss management science theory, which developed during the Second World War and which has become increasingly important as researchers have developed rigorous analytical and quantitative techniques to help managers measure and control organizational performance. Finally, we discuss business in the 1960s and 1970s and focus on the theories that were developed to help explain how the external environment affects the way organizations and managers operate.

By the end of this chapter, you will understand the ways in which management theory has evolved over time. You will also understand how economic, political, and cultural forces have affected the development of these theories and the ways in which managers and their organizations behave. Figure 2.1 summarizes the chronology of the management theories that are discussed in this chapter. ●

Scientific Management Theory

The evolution of modern management began in the closing decades of the nineteenth century, after the industrial revolution had swept through Europe, Canada, and the United States. In the new economic climate, managers of all types of

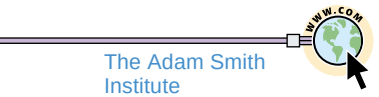
Figure 2.1
The Evolution of Management Theory



organizations–political, educational, and economic–were increasingly trying to find better ways to satisfy customers' needs. Many major economic, technical, and cultural changes were taking place at this time. The introduction of steam power and the development of sophisticated machinery and equipment changed the way in which 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 products.

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. Many of the managers and supervisors had only a technical orientation, and were unprepared for the social problems that occur when people work together in large groups (as in a factory or shop system). Managers began to search for new techniques to manage their organizations' resources, and soon they began to focus on ways to increase the efficiency of the worker–task mix.

Job Specialization and the Division of Labour



The Adam Smith Institute
www.adamsmith.org.uk/

The famous economist Adam Smith was one of the first to look at the effects of different manufacturing systems.[7] He compared the relative performance of two different manufacturing methods. The first was similar to crafts-style production, in which each worker was responsible for all of the 18 tasks involved in producing a pin. The other had each worker performing only 1 or a few of the 18 tasks that go into making a completed pin.

Smith found that factories in which workers specialized in only 1 or a few tasks had greater performance than factories in which each worker performed all 18 pin-making tasks. In fact, Smith found that 10 workers specializing in a particular task could, between them, make 48 000 pins a day, whereas those workers who performed all the tasks could make only a few thousand at most.[8] Smith reasoned that this difference in performance was due to the fact that 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 had to perform many tasks. Smith concluded that increasing the level of **job specialization**–the process by which a division of labour occurs as different workers specialize in different tasks over time–increases efficiency and leads to higher organizational performance.[9]

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

Based on Adam Smith's observations, early 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 labour.

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 believed that if the amount of time and effort that each worker expended to produce a unit of output (a finished good or service) could be reduced by increasing specialization and the division of labour, then the production process would become more efficient. Taylor believed that the way to create the most efficient division of labour could best be determined by means of scientific management techniques, rather than intuitive or informal rule-of-thumb knowledge. Based on his experiments and observations as a manufacturing manager in a variety of settings, he developed four principles to increase efficiency in the workplace:[10]

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

- Principle 1: *Study the way workers perform their tasks, gather all the informal job knowledge that workers possess, and experiment with ways of improving the way 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 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 the pin factory or on Ford's car assembly line. Taylor also sought 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 tool 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 that the procedures could be taught to all workers performing the same task. These rules could be used to standardize and simplify jobs further–essentially, to make jobs even more routine. In this way, efficiency could be increased throughout an organization.

- Principle 3: *Carefully select workers so that they 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 in order 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.[11]

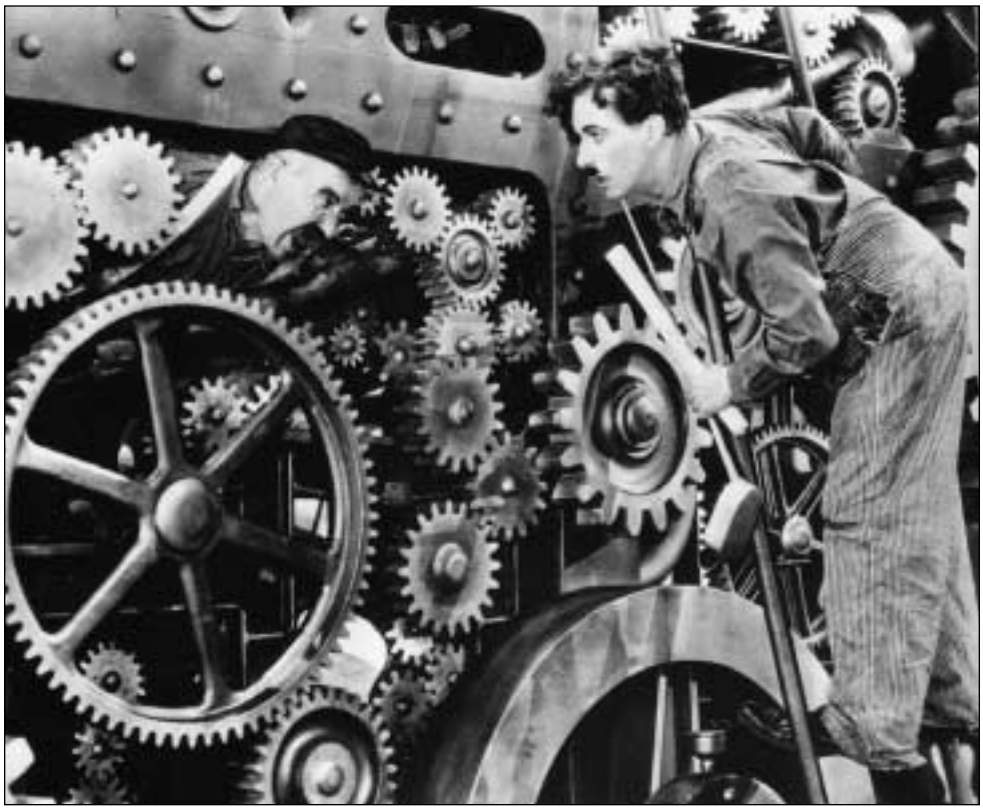
- Principle 4: *Establish a fair or acceptable level of performance for a task, and then develop a pay system that provides a reward for performance above the acceptable level.*

To encourage workers to perform at a high level of efficiency, and to provide them with an incentive to reveal the most efficient techniques for performing a task, Taylor advocated that workers should 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.

Why might scientific management lead to an increase in labour union participation?

By 1910, Taylor's system of scientific management had become known and, in many instances, faithfully and fully practised.[12] 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 them to do more work for the same pay. Workers also learned that increases in performance 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 left them with a distrust of managers who did not seem to care about their well-being.[13] These dissatisfied workers resisted attempts to use the new scientific



Charlie Chaplin tries to extricate a fellow employee from the machinery of mass production in this clip from *Modern Times*. The complex machinery is meant to represent the power that machinery has over the worker in the new work system.

management techniques and at times even withheld their job knowledge from managers to protect their jobs and pay.

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 for Henry Ford's introduction of 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 way to create a division of labour to suit the needs of a mechanized production system.

From a performance perspective, the combination of the two management practices–(1) achieving the right mix of worker–task specialization and (2) linking people and tasks by the speed of the production line–makes sense. It produces the huge savings in cost and huge increases in output that occur in large, organized work settings. For example, in 1908, managers at the Franklin Motor Company redesigned the work process using scientific management principles, and the output of cars increased from 100 cars a *month* to 45 cars a *day*; workers' wages increased by only 90 percent, however.[14] From other perspectives, though, scientific management practices raise many concerns. The definition of the workers' rights not by the workers themselves but by the owners or managers as a result of

the introduction of the new management practices raises an ethical issue, which we examine in this "Ethics in Action."

Ethics in Action

Fordism in Practice

From 1908 to 1914, through trial and error, Henry Ford's talented team of production managers pioneered the development of the moving conveyor belt and thus changed manufacturing practices forever. Although the technical aspects of the move to mass production were a dramatic financial success for Ford and for the millions of Americans who could now afford cars, for the workers who actually produced the cars, many human and social problems resulted.

With simplification of the work process, workers grew to hate the monotony of the moving conveyor belt. By 1914, Ford's car plants were experiencing huge employee turnover–often reaching levels as high as 300 or 400 percent per year as workers left because they could not handle the work-induced stress.[15] Henry Ford recognized these problems and made an announcement: From that point on, to motivate his workforce, he would reduce the length of the workday from nine hours to eight hours, and the company would double the basic wage from US$2.50 to US$5.00 per day. This was a dramatic increase, similar to an announcement today of an overnight doubling of the minimum wage. Ford became an internationally famous figure, and the word "Fordism" was coined for his new approach.[16]

Ford's apparent generosity was matched, however, by an intense effort to control the resources–both human and material–with which his empire was built. He employed hundreds of inspectors to check up on employees, both inside and outside his factories. In the factory, supervision was close and confining. Employees were not allowed to leave their places at the production line, and they were not permitted to talk to one another. Their job was to concentrate fully on the task at hand. Few employees could adapt to this system, and they developed ways of talking out of the sides of their mouths, like ventriloquists, and invented a form of speech that became known as the "Ford Lisp."[17] Ford's obsession with control brought him into greater and greater conflict with managers, who were often fired when they disagreed with him. As a result, many talented people left Ford to join his growing rivals.

Outside the workplace, Ford went so far as to establish what he called the "Sociological Department" to check up on how his employees lived and the ways in which they spent their time. Inspectors from this department visited the homes of employees and investigated their habits and problems. Employees who exhibited behaviours contrary to Ford's standards (for instance, if they drank too much or were always in debt) were likely to be fired. Clearly, Ford's effort to control his employees led him and his managers to behave in ways that today would be considered unacceptable and unethical, and in the long run would impair an organization's ability to prosper.

Despite the problems of worker turnover, absenteeism, and discontent at Ford Motor Company, managers of the other car companies watched Ford reap huge gains in efficiency from the application of the new management principles. They believed that their companies would have to imitate Ford if they were to survive. They followed Taylor and used many of his followers as consultants to teach them how to adopt the techniques of scientific management. In addition, Taylor elaborated his principles in several books, including *Shop Management* (1903) and *The*

A scene from *Cheaper by the Dozen* illustrating how "efficient families," such as the Gilbreths, use formal family courts to solve problems of assigning chores to different family members and to solve disputes when they arise.

Principles of Scientific Management (1911), which explain in detail how to apply the principles of scientific management to reorganize the work system.[18]

Taylor's work has had an enduring effect on the management of production systems. Managers in every organization, whether it produces goods or services, now carefully analyze the basic tasks that must be performed and try to devise the work systems that will allow their organizations to operate most efficiently.

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.[19] Their aims were to (1) break up into each of its component actions and analyze every individual action necessary to perform a particular task, (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 of 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*, 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.[20]

Eventually, the Gilbreths became increasingly interested in the study of fatigue. They studied how the physical characteristics of the workplace contribute to job stress that often leads to fatigue and thus poor performance. They isolated factors–such as lighting, heating, the colour of walls, and the design of tools and machines–that result in worker fatigue. 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 in order to protect their own well-being.[21]

Administrative Management Theory

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

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

The Theory of Bureaucracy

Max Weber (1864–1920) wrote at the turn of the twentieth century, when Germany was undergoing its industrial revolution.[22] To help Germany manage its growing industrial enterprises at a time when it was striving to become a world power, Weber developed the principles of **bureaucracy**–a formal system of organization and administration designed to ensure efficiency and effectiveness. A bureaucratic system of administration is based on five principles (summarized in Figure 2.2).

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

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

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

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' behaviour to achieve organizational goals. In a bureaucratic system of administration, obedience is owed to a manager, not because of any personal qualities that he or she might possess–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.[23]

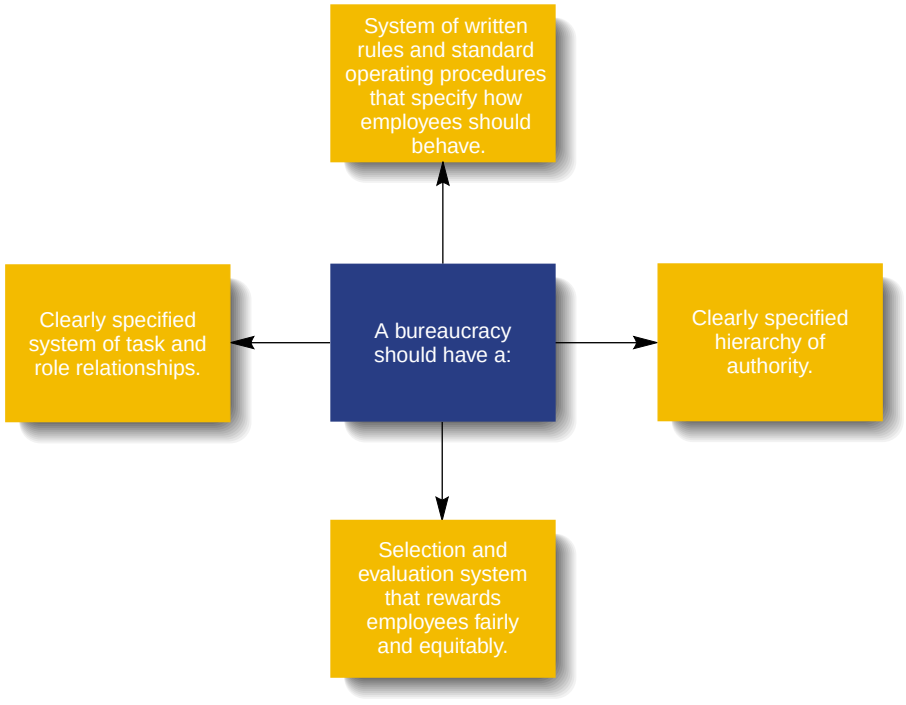
- Principle 2: *In a bureaucracy, people should occupy positions because of their performance, not because of their social standing or personal contacts.*

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 promotional 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

Figure 2.2
Weber's Principles of Bureaucracy



Christie Hefner, the daughter of Playboy founder Hugh Hefner, now runs Playboy Enterprises. Do you think Ms. Hefner earned this position based on her performance or knowledge, or received it based on her relationship to Hugh Hefner? Do you consider her gender an opportunity or barrier for her success in the industry?

and what to expect from each other. Moreover, an organization can hold all its employees strictly accountable for their actions when each person is completely familiar with his or her responsibilities.

- Principle 4: *So that authority can be exercised effectively in an organization, positions should be arranged hierarchically, so employees know whom to report to and who reports to them.*[24]

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, CSIS, RCMP, 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.

- Principle 5: *Managers must create a well-defined system of rules, standard operating procedures, and norms so that they can effectively control behaviour within 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 then specifies 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. For example, an organizational norm in a restaurant might be that waiters should help each other if time permits.

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

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

norms Unwritten rules and informal codes of conduct that prescribe how people should act in particular situations.

Rules, SOPs, and norms provide behavioural guidelines that improve the performance of a bureaucratic system because they specify the best ways to accomplish organizational tasks. Companies such as McDonald's and Wal-Mart have developed extensive rules and procedures to specify the types of behaviours that are required of their employees, such as, "Always greet the customer with a smile."

Weber believed that organizations that implement all five principles will establish a bureaucratic system that will improve 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.[25]

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 becomes slow and inefficient and organizations are unable to change. When managers rely too much on rules to solve problems and not enough on their own skills and judgment, their behaviour becomes inflexible. A key challenge for managers is to use bureaucratic principles to benefit, rather than harm, an organization.

Fayol's Principles of Management

Working at the same time as Weber but independently of him, Henri Fayol (1841–1925), the CEO of Comambault Mining, identified 14 principles (summarized in Table 2.1) that he believed to be essential to increasing the efficiency of the management process.[26] Some of the principles that Fayol outlined have faded from contemporary management practices, but most have endured.

Table 2.1
Fayol's 14 Principles of Management

Division of Labour Job specialization and the division of labour 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.

The principles that Fayol and Weber set forth still provide a clear and appropriate set of guidelines that managers can use to create a work setting that makes efficient and effective use of 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.

Behavioural Management Theory

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

The **behavioural management** theorists writing in the first half of the twentieth century all espoused a theme that focused on how managers should personally behave in order to motivate employees and encourage them to perform at high levels and be committed to the achievement of organizational goals. The "Management Insight" indicates how employees can become demoralized when managers do not treat their employees properly.

Management Insight

How to Discourage Employees

Catherine Robertson, owner of Vancouver-based Robertson Telecom Inc., made headlines in February 2001 for her management policies.[27] Robertson is a government contractor whose company operates Enquiry BC, which gives British Columbians toll-free telephone information and referral services about all provincial government programs.

Female telephone operators at Robertson Telecom must wear skirts or dresses even though they never come in contact with the public. Not even dress pants are allowed. As Gillian Savage, a former employee, notes, "This isn't a suggested thing, it's an order: No pants." Brad Roy, another former employee,

claims a female Indo-Canadian employee was sent home to change when she arrived at work wearing a Punjabi suit (a long shirt over pants).

The no-pants rule is not the only concern of current and former employees. Roy also said, "I saw some people being reprimanded for going to the washroom." While Robertson denied Roy's allegation regarding washrooms, she did confirm that company policy included the no-pants rule, that employees were not allowed to bring their purses or other personal items to their desks, and that they were not allowed to drink coffee or bottled water at their desks. The company does not provide garbage cans for the employees.

A group of current and former employees recently expressed concern with the number of rules Robertson has in place, and claimed that the rules have led to high turnover and poor morale. A current employee claims that many workers do not care whether they give out the right government phone numbers.

Robertson said that she knew of no employees who were discontent, and was shocked that the policies had caused distress among employees. She defended the dress code as appropriate business attire.

Robertson may have to make some adjustments in her management style. The cabinet minister responsible for Enquiry BC, Catherine MacGregor, ordered an investigation of the contractor after being contacted by *The Vancouver Sun* about the allegations. She noted that the skirts-only rule for women is not appropriate, and that, "All of our contractors are expected to fully comply with the Employment Standards Act, Workers Compensation rules and human rights legislation."

Additionally, Mary-Woo Sims, head of the BC Human Rights Commission, said dress codes can't be based on gender. Thus, an employer can't tell men they must wear pants (as Robertson does), but tell women they can't. "On the face of it, it would appear to be gender discriminatory," Sims said.

BC Employment Standards Branch
www.labour.gov.bc.ca/esb/

BC Human Rights Commission
www.bchrc.gov.bc.ca/

The Work of Mary Parker Follett

Why is it important to think about the human side of management?

If F.W. Taylor is considered to be the father of management thought, Mary Parker Follett (1868–1933) serves as its mother.[28] Much of her writing about management and about the way managers should behave toward workers was a response to her concern that Taylor was 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.[29] Taylor, for example, relied on 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 utilized today.[30]

Fayol also mentioned expertise and knowledge as important sources of managers' authority, but Follett went further. She proposed that knowledge and expertise, and not managers' formal authority deriving from their position in the hierarchy, should decide who would 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 behavioural approach to management was very radical for its time.

The Hawthorne Studies and Human Relations

Hawthorne Studies
http://management learning.com/topi/ mngthwth.html

Probably because of its radical nature, Follett's work was unappreciated by managers and researchers until quite recently. Instead, researchers continued to follow in the footsteps of Taylor and the Gilbreths. One focus was on how efficiency might be increased through improving 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.[31] 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 presumably workers could 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. Subsequently, it was found that many other factors also influence worker behaviour, and it was not clear what was actually influencing the Hawthorne workers' behaviour. 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 a manager's behaviour or leadership approach can affect performance. This finding led many researchers to turn their attention to managerial behaviour and leadership. If supervisors could be trained to behave in ways that would elicit cooperative behaviour from their subordinates, then productivity could be increased. From this view emerged the **human relations movement**, which advocates that supervisors be behaviourally trained to manage subordinates in ways that elicit their cooperation and increase their productivity.

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

human relations movement Advocates of the idea that supervisors be behaviourally trained to manage subordinates in ways that elicit their cooperation and increase their productivity.

The importance of behavioural 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 in order 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. Since the work group can influence the behaviour 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 of the main implications of the Hawthorne studies was that the behaviour 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 behavioural rules and norms that emerge in a group, when they try to manage or change behaviour 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 in order to raise performance or to restrict output and thwart the attainment of organizational goals.[32] The Hawthorne studies demonstrated the importance of understanding how the feelings, thoughts, and behaviour of work-group members and managers affect performance. It was becoming increasingly clear to researchers that understanding behaviour in organizations is a complex process that is critical to increasing performance.[33] Indeed, the increasing interest in the area of management known as **organizational behaviour**, 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 behavioural rules and norms that emerge in a group.

organizational behaviour 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 the Second World War revealed how assumptions about workers' attitudes and behaviour affect managers' behaviour. Perhaps the most influential approach was developed by Douglas McGregor. He proposed that two different sets of assumptions about work attitudes and behaviours dominate the way managers think and affect how they behave in organizations. McGregor named these two contrasting sets of assumptions *Theory X* and *Theory Y* (see Figure 2.3).[34]

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

Theory X Negative assumptions about workers that lead to the conclusion that a manager's task is to supervise them closely and control their behaviour.

Managers who accept the assumptions of Theory X design and shape the work setting to maximize their control over workers' behaviours and minimize workers'

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.

control over the pace of work. These managers believe that 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 behaviour. They see little point in giving workers autonomy to solve their own problems because they think that the workforce neither expects nor desires cooperation. Theory X managers see their role as to closely monitor 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 Positive assumptions about workers that lead 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 control workers' behaviour closely in order to make them perform at a high level, because workers will 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."[35] 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 behaviour 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 that 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, but 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.

Management Science Theory

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 in order to raise efficiency. There are many branches of management science; each of them deals with a specific set of concerns:

- *Quantitative management* utilizes mathematical techniques–such as linear and nonlinear programming, modelling, 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.
- *Operations management (or operations research)* provides managers with a set of techniques that they can use to analyze any aspect of an organization's production system to increase efficiency.
- *Total quality management (TQM)* focuses on analyzing an organization's input, conversion, and output activities to increase product quality.[36]

- *Management information systems (MIS)* help managers design information systems that provide information about events occurring inside the organization as well as in its external environment–information that is vital for effective decision making.

All these subfields of management science provide tools and techniques that managers can use to help improve the quality of their decision making and increase efficiency and effectiveness.

Organizational Environment Theory

An important milestone in the history of management thought occurred when researchers went beyond the study of how managers can influence behaviour 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.[37] 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.[38] 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 then 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 that the cycle can begin again.

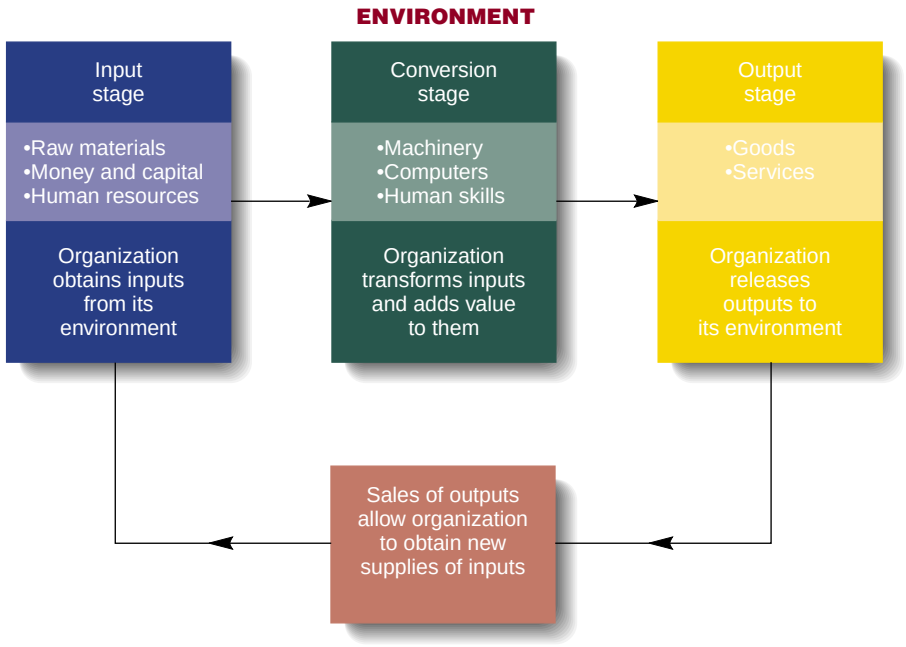
The system just described is said to be "open" because the organization draws from and interacts with the external environment in order to survive; in other words, the organization is open to its environment. A closed system, in contrast, is a self-contained system that is not affected by changes that occur 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**, the tendency of a 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 that occur in its external environment.

entropy The tendency of a 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. Manufacturing companies like Ford and General Electric, for example, buy inputs such as component parts, skilled and semiskilled labour, and robots and computer-controlled manufacturing equipment; then, at the con-

Figure 2.4
The Organization as an Open System



version stage, they use their manufacturing skills to assemble inputs into outputs of cars and computers. 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 parts are more than the sum of the whole"; they mean that an organization performs at a higher level when its departments work together rather than separately. **Synergy**, the performance gains that result when individuals and departments coordinate their actions, is possible only in an organized system. The recent interest in using teams comprising people from different departments reflects systems theorists' interest in designing organizational systems to create synergy and thus increase efficiency and effectiveness.

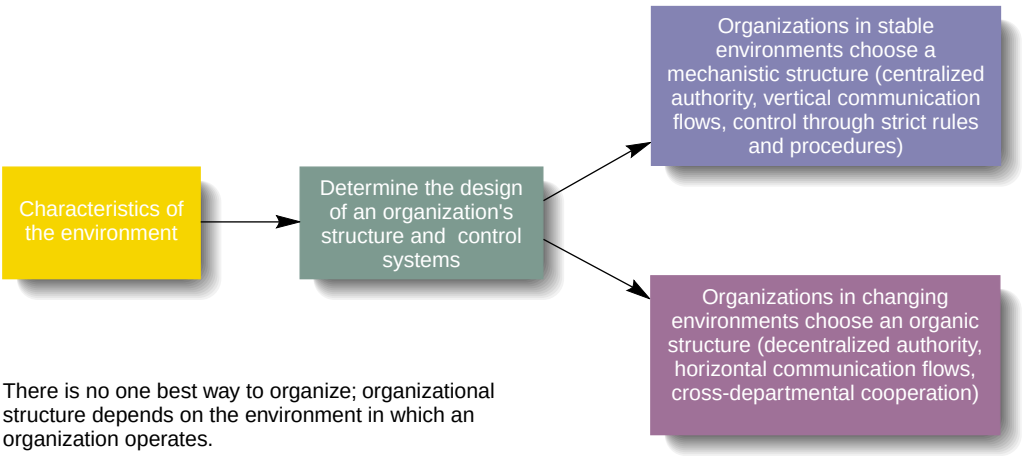
synergy Performance gains that result when individuals and departments coordinate their actions.

Contingency Theory

contingency theory The idea that managers' choice of organizational structures and control systems depends on—is 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 the United Kingdom and Paul Lawrence and Jay Lorsch in the United States.[39] 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 particular 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).

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.

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 compact discs) and result in the obsolescence of existing products (eight-track tapes); the entry of new competitors (such as foreign organizations that compete for available resources); and unstable economic conditions. In general, the more quickly the organizational environment is changing, the greater are the problems associated with gaining access to resources and the greater is the manager's need to find ways to coordinate the activities of people in different departments in order to respond to the environment quickly and effectively.

The basic idea behind contingency theory–that there is no one best way to design or lead an organization–has been incorporated into other areas of management theory, including leadership theories.

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*.[40] 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 behaviour 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' behaviour. 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.

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, as in Mary Parker Follett's model, authority rests with the individuals and departments best positioned to control the current problems the organization is facing. In an organic structure, control is much looser than it is in a mechanistic structure, and reliance on shared norms to guide organizational activities is greater.

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.

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, so it is used only when needed–when the organizational environment is unstable and rapidly changing. To facilitate global expansion, managers at Philips (a Dutch electronics company) were forced to change from a mechanistic to an organic structure, and their experience illustrates the different properties of these structures.

Managing Globally

Philips' Organic Structure Works

Established in 1891, the Dutch company Philips NV (www.philips.com) is one of the world's largest electronics companies, making products as diverse as light bulbs, computers, medical equipment, and semiconductors.[41] By 1990, Philips had over 700 divisions in over 60 countries and operated thousands of manufacturing plants employing more than 250 000 people worldwide. Despite its global reach, however, Philips was in deep trouble. In 1990, it lost $2.02 billion on sales of over $4.65 billion, and its very survival was threatened. What was the problem? The external environment was changing rapidly, and Philips' mechanistic structure was not allowing the company to adapt to the changes that were taking place.

Philips' environment was changing in several ways. First, the development of the European Union had increased competition from other European electronics companies, such as the United Kingdom's General Electric. Second, competition from Sony, Matsushita, and other low-cost Japanese companies had increased. Third, advances in technology in the form of new and more powerful computer chips and lasers had ushered in a new era of global competition. Philips' organizational structure was preventing managers from responding quickly to these challenges.

Over the years, decision making at Philips had become extremely centralized; all significant new product decisions were made in the Netherlands at the company's Eindhoven headquarters. At Eindhoven, 3000 corporate managers supervised the 2500 middle managers who were responsible for coordinating product development on a global scale. Decisions made by these 5500 managers were communicated to managers in Philips' 700 divisions spread across 60 countries, who then made decisions for their respective countries. Philips' tall, centralized, mechanistic structure slowed communication and decision making and undermined the company's ability to respond to the global changes taking place. Moreover, very little communication was occurring between

managers on the same hierarchical level but in different divisions (such horizontal communication is critical to speeding up the development of new products and reducing costs).

Top managers realized they had to change the organizational structure to allow the company to respond better to its environment. They began by dividing the organization into four product groups–lighting, consumer electronics, electronic components, and telecommunication. They gave each product group global responsibility for all aspects of its own activities–research, sales, and manufacturing.[42] In other words, they decentralized authority to the managers of the product groups. In this way, Philips tried to create a flatter, more flexible organic structure at a global level–a structure in which managers close to the action, not top managers at distant corporate headquarters, made decisions. Throughout the 1990s, the change to an organic structure produced major success for Philips. Costs fell, the speed of new product development increased sharply, and Philips made record profits. Nevertheless, low-cost competition from countries such as China, Korea, and Malaysia is still forcing managers to search continuously for better, more efficient ways to meet the challenges of the global environment.

Because the managers of many global organizations have been facing problems similar to those of Philips, researchers' interest in managers' attempts to deal with the organizational environment both at home and abroad has increased rapidly. Part Three of this book is devoted to strategic management, the study of the relationship between organizations and their external environment and of the strategies organizations adopt to manage that environment.[43]

Tips for Managers

Applying Management Principles

1. Analyze whether an organization's division of labour is meeting its current needs. Consider ways to change the level of job specialization to increase performance.
2. Examine the way an organization works in reference to Weber and Fayol's principles. Decide if the distribution of authority in the hierarchy best meets the organization's needs. Similarly, decide if the right system to discipline or remunerate employees is being used.
3. Examine organizational policies to see if managers are consistently behaving in an equitable manner and whether these policies lead to ethical employee behaviour.

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.

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 labour remains the basis for the design of work settings in modern organizations. New developments like lean production and total quality management are often viewed as advances on the early scientific management principles developed by Taylor and the Gilbreths.

Chapter Summary

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

BEHAVIOURAL MANAGEMENT THEORY Researchers have described many different approaches to managerial behaviour, including Theories X and Y. Often, the managerial behaviour that researchers suggest reflects the context of their own historical era and culture. Mary Parker Follett advocated managerial behaviours that did not reflect accepted modes of managerial behaviour at the time, but her work was largely ignored until conditions changed.

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

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 the way they utilize organizational resources and compete successfully 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

1. Choose a fast-food restaurant, a department store, or some other organization with which you are familiar, and describe the division of labour and job specialization it uses to produce goods and services. How might this division of labour be improved?
2. Apply Taylor's principles of scientific management to improve the performance of the organization you chose in Item 1.
3. In what ways are Weber's and Fayol's ideas about bureaucracy and administration similar? In what ways do they differ?
4. Question a manager about his or her views of the relative importance of Fayol's 14 principles of management.
5. Which of Weber's and Fayol's principles seem most relevant to the creation of an ethical organization?
6. Why was the work of Mary Parker Follett ahead of its time? To what degree do you think it is appropriate today?
7. Visit various organizations in your community, and identify those that seem to operate with a Theory X or a Theory Y approach to management.
8. What is contingency theory? What kinds of organizations familiar to you have been successful or unsuccessful in dealing with contingencies from the external environment?
9. Why are mechanistic and organic structures suited to different types of organizational environment?

Building Management Skills

Managing Your Own Business

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

Imagine that you are the founding entrepreneur of a software company that specializes in developing computer games for home computers. Customer demand for your games has increased so much that over the last year you have grown from a busy one-person operation to employ 16 people. 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 secretaries. In the next year, you expect to hire 30 new people, 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 labour between subordinates? Will your subordinates work alone and report to you or work in teams?
2. What management approach (for example, Theory X or Theory Y, Scientific Management, etc.) do you propose to use to run your organization? In 50 words or less, write a statement describing the management approach you propose to use to motivate and coordinate your subordinates, and tell why you think this style will be best.

Small Group Breakout Exercise

Modelling 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

Specific Assignment

Investigate the history of Ford Motor Company by utilizing the extensive resources of Ford's historical library. Research Ford's Web site (www.ford.com), and locate and read the material on Ford's history and evolution over time.

1. What kinds of management concerns have occupied Ford's top managers from its beginnings to today?
2. Do these concerns seem to have changed over time?

General Assignment

Search for a Web site that contains the time line or a short history of a company, detailing the way the organization has developed over time. What are the significant stages in the company's development, and what problems and issues have confronted managers at these stages?

ManagementCase

A Shake-Up at Eastman Kodak

Eastman Kodak Company was incorporated in New Jersey on October 24, 1901, as successor to Eastman Dry Plate Company, the business originally established by George Eastman in 1880. The Dry Plate Company had been formed to mass-produce the dry plates needed for early cameras. After George Eastman developed silver-halide paper-based photographic film and invented the first portable camera, he formed his new company to capitalize on his inventions.

From the beginning, Eastman was aware of the need to reduce costs to bring his products to the mass market, and he quickly adopted scientific management principles to improve production efficiency. Eastman also developed a people-oriented approach. Over the years, Eastman Kodak became known as "Mother Kodak" because of the bonds that developed between the organization and its members. Until the 1980s, Kodak never had layoffs and turnover was very low. It was quite common for both managers and workers to spend their entire working careers with Kodak, and for whole families or successive generations of families to be employed by the company at its Rochester, New York headquarters and manufacturing plants.

With success, however, decision making became centralized at the top of the organization. A group of long-term managers made all significant operating decisions and then communicated the decisions down a very tall hierarchy to managers at lower levels. When it came time to decide who would be promoted, seniority and loyalty to Mother Kodak were more important than a person's performance; fitting in and being a member of the "Kodak Team" were the keys to success.

This management approach worked well while Kodak had a virtual monopoly of the photographic products market, but it became a liability when Kodak faced stiff competition from foreign competitors like Germany's Agfa and Japan's Fuji Film. These companies, having found new ways to produce film and paper at costs lower than Kodak's, began to challenge Kodak's dominance. Managers at Kodak were slow to respond to the challenge. The organization's tall, centralized structure slowed decision making, and its conservative orientation made managers reluctant to change. In the 1980s, things went from bad to worse for Kodak as its share of the market and profits fell. Top management had to address the problems.

After much soul searching, top managers decided they had to totally change Kodak's organizational structure to make the company more competitive. They divided the company into four separate product divisions and began a massive downsizing of the workforce. Kodak's policy of lifetime employment was discontinued as managers announced the first layoffs in its history. Top management's goal was to flatten the organization's hierarchy and push authority and responsibility to employees at lower levels. Top management hoped that decentralized authority would help lower-level managers become more entrepreneurial and more inclined to search for new ways to cut costs.

These changes helped Kodak, but were not enough to reverse its decline. In 1994, in a break with the past, Kodak appointed a CEO from outside the company to change the organization further. George Fisher, former CEO of Motorola, took charge. Fisher was renowned for creating a climate of innovation at Motorola and for helping that company to become a market leader in the cellular telephone industry. To increase the rate of new product development and to help the company regain market share, he has been striving to change Kodak managers' conservative management style into an entrepreneurial approach. Fisher also has continued to restructure the company, laying off thousands more employees and managers and selling many of Kodak's divisions. The Kodak of today is very different from the Kodak of 10 years ago, and a new set of principles guides managers and workers.

Questions

1. What was the source of the problems facing Kodak in the 1980s?
2. Using the chapter material as a base, discuss the way Kodak altered its organization and management approach to deal with its problems.

ManagementCase

In the News

From the pages of *The Wall Street Journal*

Mr. Edens Profits from Watching His Workers' Every Move

Control is one of Ron Edens's favorite words. "This is a controlled environment," he says of the blank brick building that houses his company, Electronic Banking System Inc.

Inside, long lines of women sit at spartan desks, slitting envelopes, sorting contents and filling out "control cards" that record how many letters they have opened and how long it has taken them. Workers here, in "the cage," must process three envelopes a minute. Nearby, other women tap keyboards, keeping pace with a quota that demands 8500 strokes an hour.

The room is silent. Talking is forbidden. The windows are covered. Coffee mugs, religious pictures and other adornments are barred from workers' desks.

In his office upstairs, Mr. Edens sits before a TV monitor that flashes images from eight cameras posted through the plant. "There's a little bit of Sneaky Pete to it," he says, using a remote control to zoom in on a document atop a worker's desk. "I can basically read that and figure out how someone's day is going."

This day, like most others, is going smoothly, and Mr. Edens's business has boomed as a result. "We maintain a lot of control," he says. "Order and control are everything in this business."

Mr. Edens's business belongs to a small but expanding financial service known as "lockbox processing." Many companies and charities that once did their paperwork in-house now "out-source" clerical tasks to firms like EBS, which processes donations to groups such as Mothers Against Drunk Driving, the Doris Day Animal League, Greenpeace and the National Organization for Women.

More broadly, EBS reflects the explosive growth of jobs in which workers perform low-wage and limited tasks in white-collar settings. This has transformed towns like Hagerstown—a blue-collar community hit hard by industrial layoffs in the 1970s—into sites for thousands of jobs in factory-sized offices.

Many of these jobs, though, are part-time and most pay far less than the manufacturing occupations they replaced. Some workers at EBS start at the minimum wage of US$4.25 an hour and most earn about US$6 an hour. The growth of such jobs—which often cluster outside major cities—also completes a curious historic circle. During the Industrial Revolution, farmers' daughters went to work in textile towns like Lowell, Mass. In post-industrial America, many women of modest means and skills are entering clerical mills where they process paper instead of cloth (coincidentally, EBS occupies a former garment factory).

"The office of the future can look a lot like the factory of the past," says Barbara Garson, author of *The Electronic Sweatshop* and other books on the modern workplace. "Modern tools are being used to bring nineteenth-century working conditions into the white-collar world."

The time–motion philosophies of Frederick Taylor, for instance, have found a 1990s correlate in the phone, computer and camera, which can be used to monitor workers more closely than a foreman with a stopwatch ever could. Also, the nature of the work often justifies a vigilant eye. In EBS workers handle thousands of dollars in cheques and cash, and Mr. Edens says cameras help deter would-be thieves. Tight security also reassures visiting clients. "If you're disorderly, they'll think we're out of control and that things could get lost," says Mr. Edens, who worked as a financial controller for the National Rifle Association before founding EBS in 1983.

But tight observation also helps EBS monitor productivity and weed out workers who don't keep up. "There's multiple uses," Mr. Edens says of surveillance. His desk is covered with computer printouts recording the precise toll of keystrokes tapped by each data-entry worker. He also keeps a day-to-day tally of errors. The work floor itself resembles an enormous classroom in the throes of exam period. Desks point toward the front, where a manager keeps watch from a raised platform that workers call "the pedestal" or "the birdhouse." Other supervisors are positioned toward the back of the room. "If you want to watch someone," Mr. Edens explains, "it's easier from behind because they don't know you're watching." There also is a black globe hanging from the ceiling, in which cameras are positioned.

Mr. Edens sees nothing Orwellian about this omniscience. "It's not a Big Brother attitude," he says. "It's more of a calming attitude."

But studies of workplace monitoring suggest otherwise. Experts say that surveillance can create a hostile environment in which workers feel pressured, paranoid and prone to stress-related illness. Surveillance also can be used punitively, to intimidate workers or to justify their firing.

Following a failed union drive at EBS, the National Labour Relations Board filed a series of complaints against the company, including charges that EBS threatened, interrogated and spied on workers. As part of an out-of-court settlement, EBS reinstated a fired worker and posted a notice that it would refrain from illegal practices during a second union vote, which also failed.

"It's all noise," Mr. Edens says of the unfair labour charges. As to the pressure that surveillance creates, Mr. Edens sees that simply as "the nature of the beast." He adds: "It's got to add stress when everyone knows their production is being monitored. I don't apologize for that."

Mr. Edens also is unapologetic about the Draconian work rules he maintains, including one that forbids all talk unrelated to the completion of each task. "I'm not paying people to chat. I'm paying them to open envelopes," he says. Of the blocked windows, Mr. Edens adds: "I don't want them looking out—it's distracting. They'll make mistakes."

This total focus boosts productivity but it makes many workers feel lonely and trapped. Some try to circumvent the silence rule, like kids in a school library. "If you don't turn your head and sort of mumble out of the side of your mouth, supervisors won't hear you most of the time," Cindy Kesselring explains during her lunch break. Even so, she feels isolated and often longs for her former job as a waitress. "Work is your social life, particularly if you've got kids," says the 27-year-old mother. "Here it's hard to get to know people because you can't talk."

During lunch, workers crowd the parking lot outside, chatting nonstop. "Some of us don't eat much because the more you chew the less you can talk," Ms. Kesselring says. There aren't other breaks and workers aren't allowed to sip coffee or eat at their desks during the long stretches before and after lunch. Hard candy is the only permitted desk snack.

New technology, and the breaking down of labour into discrete, repetitive tasks, also have effectively stripped jobs such as those at EBS of whatever variety and skills clerical work once possessed. Workers in the cage (an antiquated banking term for a money-handling area) only open envelopes and sort contents, those in the audit department compute figures, and data-entry clerks punch in the information that the others have collected. If they make a mistake, the computer buzzes and a message such as "check digit error" flashes on the screen.

"We don't ask these people to think—the machines think for them," Mr. Edens says. "They don't have to make any decisions." This makes the work simpler but also deepens its monotony. In the cage, Carol Smith says she looks forward to envelopes that contain anything out of the ordinary, such as letters reporting that the donor is deceased. Or she plays mental games. "I think to myself, *A* goes in this pile, *B* goes here and *C* goes there—sort of like Bingo." She says she sometimes feels "like a machine," particularly when she fills out the "control card" on which she lists "time in" and "time out" for each tray of envelopes. In a slot marked "cage operator," Ms. Smith writes her code number, 3173. "That's me," she says.

Barbara Ann Wiles, a keyboard operator, also plays mind games to break up the boredom. Tapping in the names and addresses of new donors, she tries to imagine the faces behind the names, particularly the odd ones. "Like this one, Mrs. Fittizzi," she chuckles. "I can picture her as a very stout lady with a strong accent, hollering on a street corner." She picks out another: "Doris Angelroth—she's very sophisticated, a monocle maybe, drinking tea on an overstuffed mohair couch."

It is a world remote from the one Ms. Wiles inhabits. Like most EBS employees, she must juggle her low-paying job with childcare. On this Friday, for instance, Ms. Wiles will finish her eight-hour shift at about 4 p.m., go home for a few hours, then return for a second shift from midnight to 8 a.m. Otherwise, she would have to come in on Saturday to finish the week's work. "This way I can be home on the weekend to look after my kids," she says.

Others find the work harder to leave behind at the end of the day. In the cage, Ms. Smith says her husband used to complain because she often woke him in the middle of the night. "I'd be shuffling my hands in my sleep," she says, mimicking the motion of opening envelopes.

Her cage colleague, Ms. Kesselring, says her fiancé has a different gripe. "He dodges me for a couple of hours after work because I don't shut up—I need to talk, talk, talk," she says. And there is one household task she can no longer abide.

"I won't pay bills because I can't stand to open another envelope," she says. "I'll leave letters sitting in the mailbox for days."

Source: T. Horwitz, "Mr. Edens Profits from Watching His Workers' Every Move," *The Wall Street Journal*, December 1, 1994.

Questions

1. Which of the management theories described in the chapter does Ron Edens make most use of?
2. What is your view of Edens' management approach?