CHAPTER TWO

UNDERSTANDING THE STUDY OF ORGANIZATIONS

A Historical Review

Large, complex organizations and literature about them have existed for many centuries, but within the last two centuries in particular they have proliferated tremendously. Most of the large body of research and writing available today appeared fairly recently. This chapter reviews major developments in the research, theory, and thinking about organizations and management over the last century. Exhibit 2.1 (at the end of the chapter) provides a summary of the developments reviewed in this chapter.

This book's analysis of public organizations begins with this review for a number of reasons. It illustrates the generic theme mentioned in the previous chapter. It shows that the major contributors to this field have usually treated organizations and management as generally similar in all contexts, not drawing much of a distinction between the public and private sectors. The generic emphasis has much value, and this book draws upon it. It also sets the stage for exploring the controversy over whether public organizations can be treated as a reasonably distinct category. Later chapters present evidence supporting the claim that they are distinctive in important ways.

Managers need to be aware of the historical developments summarized in this chapter. The review covers terms, ideas, and names that serve as part of the vocabulary of management; well-prepared managers need to develop a sound understanding of these. For example, managers regularly refer to Theory X and Theory Y, span of control, and other concepts that the review covers.

In addition, this historical overview illustrates a central theme in the study and practice of management: the important role of theory and expert opinion. The review provided here shows that the different bodies of theory about how to organize and manage have strongly influenced, and been influenced by, the way managers and organizations behave. Some of the general trends involve profoundly important beliefs about the nature of human motivation and of successful organizations. The review shows that management theory and practice have evolved over the past century. Theories about the motives, values, and capacities of people in organizations have evolved, and this evolution has in turn prompted additional theories about how organizations must look and behave in response to the increasing complexity of—and rapid changes in—the contexts in which they operate. Theories and expert opinion have moved away from emphasis on highly bureaucratized organizations with strong chains of command, very specific and unchanging job responsibilities, and strong controls over the people in them, and toward more flexible, "organic" organizations, horizontal communications, and a virtual crescendo of calls for participation, empowerment, teamwork, and other versions of more decentralized, adaptive organizations. The description in Chapter One of presidents and governors calling for more flexibility in managing people in government reflects this general trend in some ways, but it also raises the question of how government organizations can respond to this trend.

The review thus shows that theories are not impractical abstractions but frameworks of ideas that often play a major role in management practice. It illustrates why the framework in Figures 1.1 and 1.2 looks as it does, and it shows that the framework actually reflects many of the major developments in the field over the century.

The Systems Metaphor

Figures 1.1 and 1.2 and the accompanying definition of organization in Chapter One implicitly reflect one major organizing theme for these developments: how the field has moved from early approaches (now considered "classical" views) that emphasized a single appropriate form of organization and management, toward more recent approaches that reject this "one best way" concept. Recent perspectives emphasize the variety of organizational forms that can be effective under the different contingencies, or conditions, that organizations face.

This trend in organization theory borrows from the literature on general systems theory. This body of theory has developed the idea that there are various types of systems in nature that have much in common. Analyzing these systems,

according to systems theorists, provides insights about diverse entities and a common language for specialists in different fields (Daft, 2010; Kast and Rosenzweig, 1973, pp. 37–56; Katz and Kahn, 1966, pp. 19–29).

A system is an ongoing process that transforms certain specified inputs into outputs; these in turn influence subsequent inputs into the system in a way that supports the continuing operation of the process. One can think of an organization as a system that takes in various resources and transforms them in ways that lead to attaining additional supplies of resources (the definition in Chapter One includes this idea). Systems have subsystems, such as communications systems or production systems within organizations, and throughput processes, which are sets of internal linkages and processes that make up the transformation process. The outputs of the system lead to feedback—that is, the influences that the outputs have on subsequent inputs. The systems theorists, then, deserve credit (or blame) for making terms such as *input* and *feedback* part of our everyday jargon. Management analysts have used systems concepts—usually elaborated far beyond the simple description given here—to examine management systems and problems.

A major trend among organizational theorists in the past century has been to distinguish between closed systems and open or adaptive systems. Some systems are closed to their environment; the internal processes remain the same regardless of environmental changes. A thermostat is part of a closed system that transforms inputs, in the form of room temperature, into outputs, in the form of responses from heating or air conditioning units. These outputs feed back into the system by changing the room temperature. The system's processes are stable and machinelike. They respond consistently in a programmed pattern.

One can think of a human being as an open or adaptive system. Humans transform their behaviors to adapt to their environment when there are environmental changes for which the system is not programmed. Thus the human being's internal processes are open to the environment and able to adapt to shifts in it.

Some organization theorists have expressed skepticism about the usefulness of the systems approach (Meyer, 1979), but others have found it helpful as a metaphor for describing how organization theory has evolved during this century. These theorists say that the earliest, "classical" theories treated organizations and employees as if they were closed systems.

Classical Approaches to Understanding Organizations

These early theories, and the advice they gave to managers, emphasized stable, clearly defined structures and processes, as if organizational goals were always

clear and managers' main challenge was to design the most efficient, repetitive, machinelike procedures to maximize attainment of the organization's goals. Some organization theorists also characterize this view as the "one best way" approach to organization.

Frederick Taylor and Scientific Management

In a *New Yorker* cartoon published in 1990, a woman has walked into an office where a man is kneeling on top of filing cabinets and reaching down into the drawers of the cabinet and filing papers. The woman says, "According to our time-and-motion studies, you handle your time very well, but a lot of your motion is wasted." The cartoon assumes that at the end of the twentieth century any intelligent person would know the meaning of a time-and-motion study. This technique became well-known because of the scientific management school.

Frederick Taylor (1919) is usually cited as one of the pioneers of managerial analysis. He was the major figure in the scientific management school, which in Taylor's own words involved the systematic analysis of "every little act" in tasks to be performed by workers. Taylor asserted that scientific management involved a division of labor that was relatively new in historical terms. Whereas for centuries work processes had been left to the discretion of skilled craftspeople and artisans, scientific management recognized a division of responsibility between a managerial group and a group that performed the work. The role of management was to gather detailed information on work processes, analyze it, and derive rules and guidelines for the most efficient way to perform the required tasks. Workers were then to be selected and trained in these procedures so they could maximize their output, the quality of their work, and their own earnings.

The procedures that Taylor and others developed for analyzing and designing tasks are still in use today. They conducted time-motion studies, which involved the detailed measurement and analysis of physical characteristics of the workplace, such as the placement of tools and machinery in relation to the worker and the movements and time that the worker had to devote to using them. The objective was to achieve the most efficient physical layout for the performance of a specified task. Analytical procedures of this sort are still widely used in government and industry.

Taylor's determination to find the "one best way" to perform a task was such that he even devoted himself to finding the best way to design golf greens and golf clubs. He designed a putter that the golfer stabilized by cradling the club in his or her elbows. The putter proved so accurate that the U.S. Golf Association banned it (Hansen, 1999).

Taylor's emphasis on the efficient programming of tasks and workers provoked controversy even in its heyday. In later years critics attacked his work for its apparent inhumanity and its underestimation of psychological and social influences on worker morale and productivity. Some of this criticism is overdrawn and fails to give Taylor credit for the positive aspects of his pioneering work. Taylor actually felt that his methods would benefit workers by allowing them to increase their earnings and the quality of their work. In his own accounts of his work he said that he originally became interested in ways of encouraging workers without supervisors' having to place pressure on them. As a manager, he had been involved in a very unpleasant dispute with workers, which he attributed to the obligation to put them under pressure (Burrell and Morgan, 1980, p. 126). He wanted to find alternatives to such situations.

Yet Taylor did emphasize pay as the primary reward for work. He stressed minute specialization of worker activities, as if the worker were a rather mindless component of a mechanistic process. He did not improve his image with later organizational analysts when he used as an illustration of his techniques a description of his efforts to train a Scandinavian worker, whom he said was as dumb as an ox, in the most efficient procedures for shoveling pig iron. Though the value of his contribution is undeniable, as a guiding conception of organizational analysis scientific management severely oversimplified the complexity of the needs of humans in the workplace.

Max Weber: Bureaucracy as an Ideal Construct

Also in the early decades of the century, Max Weber's writings became influential, in a related but distinct way. Organization theorists often treat Weber as the founder of organizational sociology—the analysis of complex organizations. His observations about bureaucracy as a social phenomenon provided the most influential early analysis of the topic (Gerth and Mills, 1946).

The proliferation of organizations with authority formally distributed among bureaus or subunits is actually a fairly recent development in human history. Weber undertook to specify the defining characteristics of the bureaucratic form of organization, which he saw as a relatively new and desirable form in society. He saw the spread of such organizations as part of a movement toward more legal and rational forms of authority and away from authority based on tradition (such as monarchical power) or charisma (such as that possessed by a ruler like Napoleon). The bureaucratic form was distinct even from the administrative systems of the ancient Orient (such as in Mandarin China) and from other systems regarded as similar to modern systems. In traditional feudal or aristocratic systems, Weber said, people's functions were assigned by personal

trustees or appointees of the ruler. Further, their offices were more like avocations than modern-day jobs; authority was discharged as a matter of privilege and the bestowing of a favor.

The bureaucratic form was distinct in its legalistic specification of the authorities and obligations of office. Weber wrote that the fully developed version of bureaucracy had the following characteristics:

1. Fixed, official jurisdictional areas are established by means of rules. The rules distribute the regular activities required by the organization among these fixed positions or offices, prescribing official duties for each. The rules distribute and fix the authority to discharge the duties, and they also establish specified qualifications required for each office.
2. There is a hierarchy of authority, involving supervision of lower offices by higher ones.
3. Administrative positions in the bureaucracy usually require expert training and the full working capacity of the official.
4. Management of subunits follows relatively stable and exhaustive rules, and knowledge of these rules and procedures is the special expertise of the official.
5. The management position serves as a full-time vocation, or career, for the official.

Weber regarded this bureaucratic form of organization as having technical advantages compared with administrative systems in which the officials regarded their service as an avocation, often gained by birthright or through the favor of a ruler, to be discharged at the official's personal discretion. In Weber's view, the existence of qualified career officials, a structured hierarchy, and clear, rule-based specifications of duties and procedures made for precision, speed, clarity, consistency, and reduction of costs. In addition, the strict delimiting of the duties and authority of career officials and the specification of organizational procedures in rules supported the principle of the objective performance of duties. Duties were performed consistently, and clients were treated without favoritism; the organization was freed from the effect of purely personal motives. With officials placed in positions on the basis of merit rather than birthright or political favoritism, constrained by rules defining their duties, and serving as career experts, bureaucracies represented the most efficient organizational form yet developed, from Weber's perspective.

Weber did express concern that bureaucratic routines could oppress individual freedom (Fry, 1989) and that problems could arise from placing bureaucratic experts in control of major societal functions. Nevertheless, he described

bureaucracy as a desirable form of organization, especially for efficiency and the fair and equitable treatment of clients and employees. He thus emphasized a model of organization involving clear and consistent rules, a hierarchy of authority, and role descriptions. For this reason, Weber is often grouped with the other classic figures as a proponent of what would later be characterized as the closed-system view of organizations.

The Administrative Management School: Principles of Administration

Also in the first half of the century, a number of writers began to develop the first management theories that encompassed a broad range of administrative functions that we now include under the topic of management, and the proper means of discharging those functions. They sought to develop principles of administration to guide managers in such functions as planning, organizing, supervising, controlling, and delegating authority. This group became known as the administrative management school (March and Simon, 1958).

The members of the administrative management school emphatically espoused one proper mode of organizing. They either implied or directly stated that their principles would provide effective organization. The flavor of their work and their principles are illustrated in prominent papers by two of the leading figures in this group, Luther Gulick and James Mooney. In "Notes on the Theory of Organization," Gulick (1937) discussed two fundamental functions of management: the division of work and the coordination of work. Concerning the division of work, he discussed the need to create clearly defined specializations. Specialization, he said, allows the matching of skills to tasks and the clear, consistent delineation of tasks. He noted certain limits on specialization. No job should be so narrowly specialized that it does not take up a full work day, leaving the worker idle. Certain technological conditions, or traditions or customs, may constrain the assignment of tasks; and there are certain tasks, such as licking an envelope, that involve steps so organically interrelated that they cannot be divided.

Once a task has been properly divided, coordinating the work then becomes imperative. On this matter, Gulick proposed principles that were much clearer than his general points about specialization. Work can be coordinated through organization or through a dominant idea or purpose that unites efforts. Coordination through organization should be guided by several principles. First is the span of control—the number of subordinates reporting to one supervisor. The span of control should be kept narrow, limited to between six and ten subordinates per supervisor. Effective supervision requires that the supervisor's attention not be divided among too many subordinates. Gulick also proposed the

principle of one master—each subordinate should have only one superior. There should be no confusion as to who the supervisor is. A third principle is technical efficiency through the principle of homogeneity—tasks must be grouped into units on the basis of their homogeneity. Dissimilar tasks should not be grouped together. In addition, a specialized unit must be supervised by a homogeneous specialist. Gulick gave examples of problems resulting from violation of this principle in government agencies: in an agricultural agency, for instance, the supervisor of the pest control division must not be given supervisory responsibility over the agricultural development division.

In the same paper, Gulick sought to define the job of management and administration through what became one of the most widely cited and influential acronyms in general management and public administration: POSDCORB. The letters stand for planning, organizing, staffing, directing, coordinating, reporting, and budgeting. These are the functions, he said, for which principles needed to be developed in subsequent work.

In "The Scalar Principle," Mooney (1930) presented a generally similar picture of the effort to develop principles. He said that an organization must be like a scale, a graded series of steps, in terms of levels of authority and corresponding responsibilities. The principle involved several component principles. The first of these was leadership. Under this principle, Mooney said, a "supreme coordinating authority" at the top must project itself through the entire "scalar chain" to coordinate the entire structure. This was to be accomplished through the principle of delegation, under which higher levels assign authority and responsibility to lower levels. These processes accomplished the third principle of functional definition, under which each person is assigned a specific task.

These two papers reflect the characteristics of the administrative management school. If certain of the principles seem vague, that was typical, as critics would later point out. In addition, these two authors clearly emphasize formal structure in the organization and the hierarchical authority of administrators. Although some of the principles are only vaguely discussed, others are quite clear. Tasks should be highly specialized. Lines of hierarchical authority must be very clear, with clear delegation down from the top and clear accountability and supervisory relations. Span of control should be narrow. There should be unity of command; a subordinate should be directly accountable to one superior. Like Weber and Taylor, these authors tended to emphasize consistency, rationality, and machinelike efficiency. They wrote about organizations as if they could operate most effectively as closed systems, designed according to the one proper form of organization.

The historical contribution of this group is undeniable; the tables of contents of many contemporary management texts reflect the influence of these theorists'

early efforts to conceive the role of management and administration. In some highly successful corporations, top executives have made this literature required reading for subordinates (Perrow, 1970b).

Gulick identified very strongly with public administration. He and other members of the administrative management school played important roles in the work of various committees and commissions on reorganizing the federal government, such as the Brownlow Committee in 1937 and the Hoover Commission in 1947. The reforms these groups proposed reflected the views of the administrative management school; they were aimed at such objectives as grouping federal agencies according to similar functions, strengthening the hierarchical authority of the chief executive, and narrowing the executive's span of control.

The immediate influence of these proposals on the structure of the federal government was complicated by political conflicts between the president and Congress (Arnold, 1995). They had a strong influence, however, especially on the development of an orthodox view of how administrative management should be designed in government. Some scholars argue that the influence has continued across the years. They contend that structural developments in public agencies and the attitudes of government officials about such issues still reflect an orthodox administrative management school perspective (Golembiewski, 1962; Knott and Miller, 1987; Warwick, 1975, pp. 69–71). The influence of the administrative management school on these reform efforts can be considered the most significant direct influence on practical events in government that organization theorists have ever had. Nevertheless, critics later attacked the views of the administrative management theorists as too limited for organizational analysis. As described later, researchers began to find that many successful contemporary organizations violate the school's principles drastically and enthusiastically.

Before turning to the reaction against the administrative management perspective, however, we should note the context in which the administrative management theorists as well as the preceding early theorists worked. The administrative management theorists' work was related to the broad progressive reform movement earlier in that century (Knott and Miller, 1987). Those reformers sought to eradicate corruption in government, especially on the part of urban political machines and their leaders. They sought to institute more professional forms of administration through such means as establishing the role of the city manager. In addition, the growth of government over the earlier part of the century had led to a great deal of sprawling disorganization among the agencies and programs of government; there was a need for better organization. In this context, the administrative management theorists' emphasis on basic organizational principles appears not only well justified but absolutely necessary.

It is also important to acknowledge that these early theorists did not advance their ideas as simplemindedly as some later critics depict it. Although Luther Gulick came to be characterized in many organization theory texts as one of the foremost proponents of highly bureaucratized organizations, he wrote a reflection on administrative issues from World War II in which he drew conclusions about the efficiency of democracy. He argued that the democratic system of the United States actually gave it advantages over the seemingly more authoritarian and hierarchical axis powers. The more democratic process required more participation and cooperation in problem solving and thus led to better planning and implementation of plans than in the authoritarian regimes (Van Riper, 1998). Gulick thus suggested that more democratic processes may look less efficient than more authoritarian ones, even though they can produce more efficient and effective results. It will be evident in later sections that Gulick's thinking thus foreshadowed much of contemporary management theory. (An interesting fact: Gulick's father, Luther H. Gulick, played an important role in the development of park and recreational programs and suggested to James Naismith that he invent an indoor game to keep young people in condition during cold weather. Naismith then invented basketball.)

Another very original thinker, Mary Parker Follett, wrote very approvingly of the effort to develop administrative principles, and scholars sometimes classify her as a member of this school. She wrote, however, a classic essay on "the giving of orders" (Follett, [1926] 1989) that had very original and forward-looking implications. In the essay, she proposed a cooperative, participative process for giving orders, in which superiors and subordinates develop a shared understanding of the particular situation and what it requires. They then follow the "law" of the situation rather than having a superior impose an order on a subordinate. Follett's perspective both foreshadowed later movements and influenced them in the direction of the kind of participatory and egalitarian management described later. It also foreshadowed contemporary developments in feminist organization theory (Morton and Lindquist, 1997; Guy, 1995; Hult, 1995).

Still, the several contributions covered so far concentrated on a relatively limited portion of the framework for organizational analysis given in Figures 1.1 and 1.2 and the definition of organization in Chapter One. They emphasized the middle and lower parts of the framework, particularly organizational structure. They paid some attention to tasks and to incentives and motivation, but they were quite limited in comparison with the work of later authors. Additional developments would rapidly begin to expand the analysis of organizations, with increasing attention paid to the other components in Figures 1.1 and 1.2.

Reactions, Critiques, and New Developments

Developments in the emerging field of industrial psychology led to a sharp reaction against Taylor's ideas about scientific management and the principles of the administrative management school. These developments also led to a dramatic change in the way organizational and managerial analysts viewed the people in organizations. Researchers studying behavior and psychology in industry began to develop more insight into psychological factors in work settings. They analyzed the relationships between such factors as fatigue, monotony, and worker productivity. They studied working conditions, analyzing variables such as rest periods, hours of work, methods of payment, routineness of work, and the influence of social groups in the workplace (Burrell and Morgan, 1980, p. 129).

The Hawthorne Studies: The Discovery of Human Beings in the Workplace

A series of experiments beginning in the mid-1920s at the Hawthorne plant of the Western Electric Company provided a more subtle view of the psychology of the workplace than previous theorists had produced. The Hawthorne studies involved a complex series of experiments and academic and popular reports of their results over a number of years. Controversy continues over the interpretation and value of these studies (Burrell and Morgan, 1980, pp. 120–143); however, most organization theorists describe them as pathbreaking illustrations of the influence of social and psychological factors on work behavior—conditions that often have stronger effects than factors such as pay or the physical conditions of the workplace. An employee's work-group experiences, a sense of the importance of the employee's work, and attention and concern on the part of supervisors are among a number of important social and psychological influences on workers.

The leaders of the project identified several major experiments and observations as the most significant in the study (Roethlisberger and Dickson, 1939). In one experiment, the researchers lowered the level of illumination in the workplace and found that productivity nevertheless increased, because the workers responded to the attention of the researchers. In another study, they improved the working conditions in a small unit through numerous alterations in rest periods and working hours. Increases in output were at first taken as evidence that the changes were influencing productivity. When the researchers tested that conclusion by withdrawing the improved conditions, however, they found that, rather than falling off, output remained high. In the course of the experiment, the researchers had consulted the workers about their opinions and reactions, questioned them sympathetically, and displayed concern for their physical well-being.

Their experiment on the physical conditions of the workplace had actually altered the social situation in the workplace, and that appeared to account for the continued high output.

In observing another work group, the researchers found that it enforced strict norms regarding group members' productivity. To be a socially accepted member of the group, a worker had to avoid being a "rate buster," who turns out too much work; a "chiseler," who turns out too little; or a "squealer," who says something to a supervisor that could be detrimental to another worker. This suggested to the researchers a distinction between the formal organization, as it is officially presented in organization charts and rules, and the informal organization. The informal organization develops through unofficial social processes within the organization, but it can involve norms and standards that are equally as forceful an influence on the worker as formal requirements.

The Hawthorne studies were widely regarded as the most significant demonstration of the importance of social and psychological factors in the workplace up to that time, and they contributed to a major shift in research on management and organizations. The emphasis on social influences, informal processes, and the motivating power of attention from others and a sense of significance for one's work constituted a major counterpoint against the principles of administrative management and scientific management.

Chester Barnard and Herbert Simon: The Inducements-Contributions Equilibrium and the Limits of Rationality

A successful business executive turned organization theorist and an academic who would become a Nobel laureate provided additional major contributions that weighed against the administrative management school and moved research in new directions. These contributions added substantially to the attention that organization theorists paid to organizational processes (especially decision making), people, environments, leadership, and goals and values.

Encouraged by the members of the Harvard group who were responsible for the Hawthorne studies and related work (Burrell and Morgan, 1980, p. 148), Chester Barnard wrote *The Functions of the Executive* (1938). It became one of the most influential books in the history of the field.

Barnard's definition of an organization—"a system of consciously coordinated activities or forces of two or more persons" (1938, p. 73)—illustrates the sharp difference between his perspective and that of the classical theorists. Barnard focused on how leaders induce and coordinate the cooperative activities fundamental to an organization. He characterized an organization as an "economy of incentives," in which individuals contribute their participation and

effort in exchange for incentives that the organization provides. The executive cadre in an organization must ensure the smooth operation of this economy. The executive must keep the economy in equilibrium by ensuring the availability of the incentives to induce the contributions from members that earn the resources for continuing incentives, and so on. (Notice that the definition of organization in Chapter One speaks of leaders' and organizations' seeking to gain resources from the environment to translate into incentives. This reflects the influence of Barnard's perspective.)

Barnard offered a rich typology of incentives, including not just money and physical and social factors but also power, prestige, fulfillment of ideals and altruistic motives, participation in effective or useful organizations, and many others. (Chapter Nine provides a complete listing of the possible incentives he named.)

Barnard also saw the economy of incentives as being interrelated with other key functions of the executive, especially with communication and persuasion. The executive must use communication and persuasion to influence workers' subjective valuations of various incentives. The executive can, for example, raise the salience of major organizational values. The persuasion process requires a communication process, and Barnard discussed both at length. He also distinguished between formal and informal organizations, but he saw them as interrelated and necessary to each other's success. He thought of the informal organization as the embodiment of the communication, persuasion, and inducement processes that were essential to the cooperative activity he saw as the essence of organization. Some authors now cite Barnard's ideas on these topics as an early recognition of the importance of organizational culture, a topic that has received a lot of attention in management in recent years (see, for example, Peters and Waterman, 1982; Schein, 1992).

Barnard's divergence from the classical approaches is obvious. Rather than stating prescriptive principles, he sought to describe the empirical reality of organizations. He treated the role of the executive as central, but he deemphasized formal authority and formal organizational structures, suggesting that those factors are not particularly important to understanding how organizations really operate. Compared with other authors up to that time, Barnard offered a more comprehensive analysis of the organization as an operating system, to be analyzed as such rather than bound by a set of artificial principles. His approach was apparently exhilarating to many researchers, including one of the preeminent social scientists of the century, Herbert Simon.

Simon attacked the administrative management school much more directly than Barnard had. In an article entitled "The Proverbs of Administration" in *Public Administration Review* (1946), he criticized the administrative management school's principles of administration as vague and contradictory. He compared

them to proverbs because he saw them as prescriptive platitudes, such as "Look before you leap," that are useless because they are unclear and are often countered by a contradictory proverb: "He who hesitates is lost." The principle of specialization, for example, never specified whether one should specialize by function, clientele, or place. Specialization also contradicts the principle of unity of command, which requires that a subordinate report to a superior within his or her specialization. But if a school has an accountant, who is obviously a specialist, that accountant must report to an educator. The two principles conflict.

Similarly, the principle of span of control also conflicts with unity of command. In a large organization, narrow spans of control require many hierarchical levels. There must be many small work units, with a supervisor for each. Then there must be many supervisors above those supervisors to keep the span of control narrow at that level, and so on up. This makes communication up, down, and across the organization very cumbersome, and it makes it difficult to maintain clear, direct hierarchical lines of authority.

Simon called for a more systematic examination of administrative processes to develop concepts and study their relationships. Researchers, he said, should determine when individuals in administrative settings should choose one or the other of the alternatives represented by the principles. As indicated by his critique, such choices are seldom clear. Such limits on the ability of organizational members to perform well and to be completely rational are major determinants of organizational processes and their effects. Simon argued that these limits on rationality and ability must be more carefully analyzed. In sum, he argued for a more empirical and analytical approach to organizational analysis, with decision making as the primary focus.

Hammond (1990) contends that Simon's critique of Gulick and others in the administrative management school overlooked major strengths of that approach. As mentioned earlier, the administrative management school did seek to analyze challenges that managers constantly face—challenges that later researchers have not really found answers for and that have a continuing influence on organizational structures in government. Still, most organization theorists agree that Simon's rejection of the school's principles had the stronger influence on subsequent work in the field and changed its direction.

Simon pursued his ideas further in *Administrative Behavior* (1948). As the title indicates, he emphasized analysis of actual behavior rather than stating formal prescriptions or principles. He drew on Barnard's idea of an equilibrium of inducements and contributions and extended it into a more elaborate discussion of an organization's need to provide sufficient inducements to members, external constituencies, and supporters for it to survive. (The definition and framework in Chapter One also reflect the influence of Simon's perspective.)

Like Barnard, Simon was concerned with the complex process of inducement and persuasion and with abstract incentives such as prestige, power, and altruistic service in addition to material incentives. He emphasized the uncertainties and contradictions posed by the classical principles purporting to guide administrative decisions. He displayed a continuing interest in a fundamental question: Amid such uncertainty and complexity, how are administrative choices and decisions made? The classical principles of administration were based on the assumption that administrators could and would be rational in their choice of the most efficient mode of organization. Much of economic theory assumed the existence of "economic man"—an assumption that firms and individuals are strictly rational in maximizing profits and personal gain. Simon observed that in administrative settings, there are usually uncertainties. "Administrative man" is subject to cognitive limits on rationality. Strictly rational decisions and choices are impossible in complex situations, because information and time for making decisions are limited, and human cognitive capacity is too limited to process all the information and consider all the alternatives. Whereas most economic theory assumed maximizing behavior in decision making, Simon coined a new concept. Rather than maximize, administrators "satisfice." Satisficing involves choosing the best of a limited set of alternatives so as to optimize the decision within the constraints of limited information and time. Thus an administrator does not make maximally rational decisions, because that is essentially impossible. The administrator makes the best possible decision within the constraints imposed by the available time, resources, and cognitive capacity.

This conception of the decision-making process challenged a fundamental tenet of economic theory. It influenced subsequent research on decision making in business firms, as amplified by *A Behavioral Theory of the Firm* by Richard Cyert and James March (1963; see Exhibit 2.1). It provided a major step toward more recent approaches to organizational decision making, as we will see later. With James March, Simon later published another influential book, *Organizations* (March and Simon, 1958), in which they further elaborated the theory of an equilibrium between inducements and worker contributions. They presented an extensive set of propositions about factors influencing the decision by an employee to join and stay with an organization and, once in it, to produce. Ultimately, Simon's conception of decision making in administrative settings appears to be the foremost reason that he was later awarded the Nobel Prize in economics.

Social Psychology, Group Dynamics, and Human Relationships

Another important development began in the 1930s when Kurt Lewin, a psychological theorist, arrived in the United States as a refugee from Nazism.

An immensely energetic intellectual, Lewin became one of the most influential social scientists of the century (e.g., Lewin, 1947, 1948; Lewin and Lippit, 1938; Lewin, Lippitt, and White, 1939). He developed field theory and topological psychology, which sought to explain human actions as functions of both the characteristics of the individual and the conditions impinging on the individual at a given time. This may not sound original now, but it differed from other prominent approaches of the time, such as Freudian psychology, which emphasized unconscious motives and past experiences.

Lewin's emphasis on the field of forces influencing an individual's actions drew on his interest in group behaviors and change processes in groups and individuals (Back, 1972, p. 98). He studied power, communication, influence, and "cohesion" within groups, and he developed a conception of change that has been valuable to analysts of groups and organizational change for years.

Lewin argued that groups and individuals maintain a "quasi-stationary equilibrium" in their attitudes and behaviors. This equilibrium results from a balance between forces pressing for change and those pressing against change. To change people, you must change these forces. Groups exert pressures and influences on the individuals within them. If a person is removed from a group and persuaded to change an attitude but is then returned to the same field of group pressures, the change is unlikely to last. One must alter the total field of group pressures, through a three-phase process. The first phase is "unfreezing," or weakening, the forces against change and strengthening the forces for change. Next, the "changing" phase moves the group to a new equilibrium point. Finally, the "refreezing" phase firmly sets the new equilibrium through such processes as expressions of group consensus.

One of Lewin's better-known experiments in group dynamics illustrates his meaning. Lewin conducted "action research," which involved analysis and sometimes manipulation of ongoing social processes of practical importance, such as race relations and group leadership. During World War II, Lewin sought to aid the war effort by conducting research on methods of encouraging consumption of underutilized foods as a way of conserving resources. He conducted an experiment in which he attempted to convince housewives that they should use more beef hearts in preparing meals. He assembled the housewives in groups and presented them with information favoring the change. They then discussed the matter, aired and resolved their concerns about the change ("unfreezing"), and came to a consensus that they should use more beef hearts. In groups in which the housewives made a public commitment to do so, more of them adopted the new behavior than in groups where the members made no such public commitment. The group commitment is an example of "refreezing," or setting group forces at a new equilibrium point.

As the intellectual leader of a group of social scientists interested in research on group processes, Lewin was instrumental in establishing the Research Center for Group Dynamics at MIT and the first National Training Laboratory, which served for years as a leading center for training in group processes. These activities produced an interesting set of diverse, sometimes opposing influences on later work in the field.

Lewin's efforts were among the first to apply experimental methods (such as using control groups) to the analysis of human behavior. The work of Lewin and his colleagues set in motion the development of experimental social psychology, which led to elaborate experimentation on group processes. Some of the important experiments on groups were relevant to organizational behavior. In another classic experiment conducted by members of this group, Lester Coch and John R. P. French (1948) compared different factory work groups faced with a change in their work procedures. One group participated fully in the decision to make the change, another group had limited participation, and a third group was simply instructed to make the change. The participative groups made the change more readily and more effectively, with the most participative group doing the best. These sorts of projects were instrumental in making participative decision making (PDM) a widely discussed and utilized technique in management theory and practice. Numerous experiments of this sort contributed to the growing literature on industrial psychology and organizational behavior.

Interestingly, Lewin's influence also led to an opposing trend in applied group dynamics. The National Training Laboratory conducted training in group processes for governmental and industrial organizations. After Lewin's death, the group dynamics movement split into two movements. In addition to the researchers who emphasized rigorous experimental research on group concepts, a large group continued to emphasize industrial applications and training in group processes. They tended to reject experimental procedures in favor of learning through experience in group sessions. Their work contributed to the development of the field of organization development (described in Chapter Thirteen). It also led to the widespread use of T-groups, sensitivity sessions, and encounter-group techniques during the 1960s and 1970s (Back, 1972, p. 99). The work of Lewin and his colleagues substantially influenced analysts' conceptions of the components of Figures 1.1 and 1.2, especially those concerned with processes of change and decision making and those concerned with people, especially groups.

The Human Relations School

The Hawthorne experiments and related work and the research on group dynamics were producing insights about the importance of social and psychological

factors in the workplace. They emphasized the potential value of participative management, enhancing employee self-esteem, and improving human relations in organizations. Numerous authors began to emphasize such factors.

The psychologist Abraham Maslow developed a theory of human needs that became one of the most influential theories ever developed by a social scientist. Maslow argued that human needs fall into a set of major categories, arranged in a "hierarchy of prepotency." The needs in the lowest category dominate a person's motives until they are sufficiently fulfilled, then those in the next-highest category dominate, and so on. The categories, in order of prepotency, were physiological needs, safety needs, love needs, self-esteem needs, and self-actualization needs. The self-actualization category referred to the need for self-fulfillment, for reaching one's potential and becoming all that one is capable of becoming. Thus, once a person fulfills his or her basic physiological needs, such as the need for food, and then fulfills the needs at the higher levels on the hierarchy, he or she ultimately becomes concerned with self-actualization. This idea of making a distinction between lower- and higher-order needs was particularly attractive to writers emphasizing human relations in organizations (for more detail on Maslow's formulation, see Chapter Nine).

Douglas McGregor, for example, published a book whose title foretells its message: *The Human Side of Enterprise* (1960). McGregor had been instrumental in bringing Kurt Lewin to MIT, and the influence of both Lewin and Maslow was apparent in his conceptions of "Theory X" and "Theory Y." He argued that management practices in American industry were dominated by a view of human behavior that he labeled Theory X. This theory held that employees were basically lazy, passive, resistant to change and responsibility, and indifferent to organizational needs. Hence management must take complete responsibility for directing and controlling the organization. Managers must closely direct, control, and motivate employees. McGregor felt that Theory X guided organizational practices in most industrial organizations and was at the heart of classic approaches to management, such as scientific management.

Theory Y involved a diametrically different view of employees. Drawing on Maslow's conception of higher-level needs for self-esteem and self-actualization, McGregor defined Theory Y as the view that employees are fully capable of self-direction and self-motivation. Underutilized though this theory was, management based on this approach would be more effective, because individual self-discipline is a more effective form of control than authoritarian direction and supervision. McGregor advocated management approaches that would allow more worker participation and self-control, such as decentralization of authority, management by objectives, and job enlargement.

Theory Y clearly rejected the classical approach to organization; that rejection was emphatic in other major works of the time that placed a similar value on releasing human potential in the workplace. Argyris (1957), for example, argued that there were inherent conflicts between the needs of the mature human personality and the needs of organizations. When management applies the classical principles of administration, healthy individuals will experience frustration, failure, and conflict. Healthy individuals desire relative independence, activeness, and use of their abilities. These motives clash with the classical principles, such as those that call for narrow spans of control, a clear chain of command, unity of direction, and narrow specialization. These principles foster dependence on superiors and organizational rules, promote passiveness due to reduced individual discretion, and limit workers' opportunities to use their abilities. Argyris, too, called for further development of such techniques as participative leadership and job enlargement to counter this problem.

Like the classical theorists before them, the proponents of human relations theories in turn became the targets of scathing criticism. Critics complained that they concentrated too narrowly on one dimension of organizations—the human dimension—and were relatively inattentive to other major dimensions, such as organizational structure, labor union objectives, and environmental pressures. They argued that the human relations types were repeating the mistake of proposing one best way of approaching organizational and managerial analysis, that they always treated interpersonal and psychological factors as the central, crucial issues. Some critics also grumbled about the tendency of these theories to always serve the ends of management, as if the real objective were to get workers to acquiesce in the roles management imposed on them. Even where the motives were pure, some critics asserted, the approach was often naive.

Probably the most damaging critique of the human relations approach was concerned with its lack of empirical support; that is, the lack of evidence that improved human relations would lead to improved organizational performance (Perrow, 1970b). The upsurge in empirical research that occurred in the 1950s and 1960s produced evidence of considerable conflict in some very successful organizations. Research also produced little evidence of a strong relationship between individual job satisfaction and productivity.

Like the criticisms of the classical approaches, these criticisms tended to be overblown and a bit unfair. They often overlooked the historical perspective of the writers, underestimating the significance of what they were trying to do at the time. The insights that these organizational analysts provided remain valuable—and dangerous to ignore. Examples still abound of management practices that cause damage because of inattention to the factors emphasized by the human relations theorists. When improperly implemented, scientific management techniques have

created ludicrous situations in which workers slow down or disguise their normal behaviors when management analysts try to observe them.

For example, a consulting firm once tried to implement a management improvement system in a large state agency in Florida. The system involved a detailed analysis of work procedures through a process similar to time-motion methods. The process involved having observers spot-check employees at random intervals to note their activities. If an employee was idle, the observer would record that fact. A university professor went to the office of a midlevel administrator in the agency to discuss a research project. Finding the administrator on the phone, the professor began to back out of his office, in case the administrator wanted privacy for the phone call. The administrator beckoned her back in, explaining that he was not on the phone; he was sitting there trying to think. He was holding the phone to his ear to be sure that the observer would not happen by and record him as being idle. Another administrator was not so careful. After working late into the night on a project and coming in early to complete it, he finally finished and sat back to take a break, without thinking. Too late! The observer happened by and checked his record sheet. Idle!

Another example involved a management trainee in a large manufacturing firm who was assigned to work with the firm's systems engineers on the design of the assembly line. One step in the production process involved having an employee sit and watch two glass water tanks, through which refrigerator compressors would be dragged by a wire. If there was a leak in the compressor, an air bubble would be released, and the employee would remove the compressor as defective. The management trainee expressed disgust at the incompetence of the employees, who were constantly failing at this simple task: all they had to do was sit and watch two tanks of water for eight hours. As a solution, the systems designers changed the procedure so that an employee would sit directly facing a tank and would have to watch only one tank. The management trainee expressed even more disgust to find that the employees were so stupid that they could not handle even this simple task! Later, representatives from this company contacted a university, looking for consultants to help them deal with the problems of absenteeism and vandalism on the assembly line. As these examples illustrate, even several decades after the human relations material began to appear, there are still plenty of instances of unenlightened management attitudes that could be improved by some reading in the human relations literature.

Open-Systems Approaches and Contingency Theory

Criticism of the human relations approach, increasing attention to general-systems theory, and new research findings forced a more elaborate view of organizations.

Researchers found that organizations successfully adopt different forms under different circumstances or contingencies. Organizational analysts became convinced that different forms of organization can be effective under certain contingencies of tasks and technology, organizational size, environment, and other factors. The effort to specify these contingencies and the organizational forms matched to them made contingency theory the dominant approach in organizational analysis in the 1960s and 1970s. The contingency perspective still provides a guiding framework, although researchers have either moved beyond the earlier versions of it or moved in different directions (Daft, 2010, pp. 26–32).

Around the middle of the twentieth century, researchers associated with the Tavistock Institute in Great Britain began conducting research on sociotechnical systems, emphasizing the interrelationships between technical factors and social dimensions in the workplace (Burrell and Morgan, 1980, pp. 146–147). For example, Trist and Bamforth (1951) published an analysis of a change in work processes in a coal-mining operation that is now regarded as a classic study. They found that the technical changes in the work process changed the social relationships within the work group. They depicted the organization as a system with interdependent social and technical subsystems that tend to maintain an equilibrium. In response to disturbances, the system moves to a new point of equilibrium—a new ongoing pattern of interrelated social and technical processes. Additional studies by the Tavistock researchers further developed this view that organizations are systems that respond to social, economic, and technological imperatives that have to be satisfied for effective operation of the system—that is, that there are group and individual characteristics, task requirements, and interrelations among them that must be properly accommodated in the design of the organization.

With their consistent emphasis on organizations as ongoing systems that seek to maintain equilibrium in response to disturbances, Tavistock researchers also began to devote attention to the external environments of organizations. In a widely influential article entitled "The Causal Texture of Organizational Environments," Emery and Trist (1965) noted the increasing flux and uncertainty in the political, social, economic, and technological settings in which organizations operate, and they discussed the influence on the internal operations of organizations of the degree of "turbulence" in their environment. Thus the emphasis moved toward analysis of organizations as open systems facing the need to adapt to environmental variations.

In the United States, the most explicit systems approach to organizational analysis appeared in a very prominent text by Daniel Katz and Robert L. Kahn (1966), *The Social Psychology of Organizations*. They showed how the systems language of inputs, throughputs, outputs, and feedback could be usefully applied to organizations. In analyzing throughput processes, for example, they differentiated

various major subsystems, including maintenance subsystems, adaptive subsystems, and managerial subsystems. Scholars regard Katz and Kahn's effort as a classic in the organizational literature (Burrell and Morgan, 1980, p. 158), but it also provides an example of the very general, heuristic nature of the systems approach. Because of its very general concepts, organizational researchers increasingly treated systems theory as a broad framework for organizing information, as a "macroparadigm" (Kast and Rosenzweig, 1973, p. 16), but not as a clearly articulated theory. The metaphor of organizations as open, adaptive systems remained powerful, however, as an expression of the view of organizations as social entities that adapt to a variety of influences and imperatives.

Besides the efforts to apply systems concepts to organizations, research results supported the view that organizations adopt different forms in response to contingencies. (Chapter Eight provides further description of the studies cited in the following paragraphs.) In England, Joan Woodward (1965) conducted a pathbreaking study of British industrial firms. She found that the firms fell into three categories on the basis of the production process or "technology" they employed: small-batch or unit production systems were used by such organizations as shipbuilding and aircraft manufacturing firms, large-batch or mass-production systems were operated by typical mass-manufacturing firms, and continuous production systems were used by petroleum refiners and chemical producers. Most important, she concluded that the successful firms within each category showed similar management-structure profiles, but those profiles differed among the three categories. The successful firms within a category were similar on such dimensions as the number of managerial levels, the spans of control, and the ratio of managerial personnel to other personnel, yet they differed on these measures from the successful firms in the other two categories. This indicated that the firms within a category had achieved a successful fit between their structure and the requirements of the particular production process or technology with which they had to deal. The firms appeared to be effectively adapting structure to technology.

Another very influential study, reported by Burns and Stalker (1961) in *The Management of Innovation*, further contributed to the view that effective organizations adapt their structures to contingencies. Burns and Stalker analyzed a set of firms in the electronics industry in Great Britain. The industry was undergoing rapid change, with new products being developed, markets for the products shifting, and new information and technology becoming available. The firms faced considerable flux and uncertainty in their operating environments. Burns and Stalker classified the firms into two categories on the basis of their managerial structures and practices: organic and mechanistic organizations. Their descriptions of the characteristics of these two groups depict mechanistic organizations as bureaucratic organizations designed along the lines of the classical approaches.

The name of the category also has obvious implications: these were organizations designed to operate in machinelike fashion. Burns and Stalker argued that the organic type, so named to underscore the analogy with living, flexible organisms, performed more successfully in the rapidly changing electronics industry. In these organizations there was less emphasis on communicating up and down the chain of command, on the superior controlling subordinates' behavior, and on strict adherence to job descriptions and organizational charts. There was more emphasis on networking and lateral communication, on the supervisor as facilitator, and on flexible and changing work assignments. Such organizations adapted and innovated more effectively under changing and uncertain conditions because they had more flexible structures and emphasized flexibility in communication, supervision, and role definition. The mechanistic form can be more successful under stable environmental and technological conditions, however, where its emphasis on consistency and specificity makes it more efficient than a more loosely structured organization. Thus, Burns and Stalker also emphasized the need for a proper adaptation of the organization to contingencies.

Another important research project heavily emphasized organizations' environment as a determinant of effective structure. Paul Lawrence and Jay Lorsch (1967) studied U.S. firms in three separate industries that confronted varying degrees of uncertainty, complexity, and change. The researchers concluded that the firms that were successfully operating in uncertain, complex, changing environments had more highly differentiated internal structures. By differentiated structures, they meant that the subunits differed a great deal among themselves, in their goals, time frames, and internal work climates. Yet these highly differentiated firms also had elaborate structures and procedures for integrating the diverse units in the organization. The integrating structures included task forces, liaison officers and committees, and other ways to integrate the diverse units. Successful firms in more stable, certain environments, on the other hand, showed less differentiation and integration. Lawrence and Lorsch concluded that successful firms must have internal structures as complex as the environments in which they operate.

Other researchers continued to develop the general contingency perspective and to analyze specific contingencies. Perrow (1973) published an important analysis of organizational technology. He proposed two basic dimensions for the concepts of technology: the predictability of the task (the number of exceptions and variations encountered) and the analyzability of the problems encountered (the degree to which, when one encounters a new problem or exception, one can follow a clear program for solving it). Routine tasks are more predictable (there are fewer exceptions or variations) and more analyzable (exceptions or variations can be resolved through an established program or procedures). Organizations with routine tasks have more formal, centralized structures. They use more rules,

formal procedures, and plans. Organizations with nonroutine tasks, where tasks have more exceptions and are harder to predict and where exceptions are harder to analyze and resolve, must have more flexible structures. They use more formal and informal meetings than rules and plans. (Chapter Eight describes a study confirming these relationships in public organizations.)

At about the same time, James Thompson (1967) published *Organizations in Action*, a very influential book that further developed the contingency perspective. Drawing on Herbert Simon's ideas about bounded rationality and satisficing, Thompson depicted organizations as reflecting their members' striving for rationality and consistency in the face of pressures against those qualities. He advanced numerous propositions about how organizations use hierarchy, structure, units designed to buffer the environment, and other arrangements to try to "isolate the technical core"—that is, to create stable conditions for the units doing the basic work of the organization. Thompson suggested that organizations will try to group subunits on the basis of their technological interdependence—that is, their needs for information and exchange with each other in the work process (see Chapter Eight). Organizations, he proposed, will also adapt their structures to their environment. Where environments are shifting and unstable, organizations will adopt decentralized structures, with few formal rules and procedures, to provide flexibility for adapting to the environment (Chapter Four provides further description). One of Thompson's important achievements was to provide a driving logic for contingency and open-systems perspectives by drawing on Simon's ideas. Organizations respond to complexity and uncertainty in their technologies and their environments by adopting more complex and flexible structures. They do so because the greater demands for information processing strain the bounded rationality of managers and the information processing capacity of more formal bureaucratic structures. Clear chains of command and vertical communication up and down them and strict specialization of tasks and strict rules and procedures can be too slow and inflexible in processing complex information and adapting to it.

In the 1990s, probably without realizing it, an executive of one of the major computer corporations in the world expressed this kind of logic. His corporation was suffering operating losses and was losing out in competition with smaller, more innovative firms. The corporation, the executive said, had been taking too long to make decisions and to respond to new conditions. It had too many levels, and innovations required too many reviews and approvals within the hierarchy. The corporation, he said, was trying to decentralize into many smaller, more independent units that could respond to markets and competitors more rapidly. The executive said that the corporation had to push authority down in its organizational structure so that decisions could be made rapidly by the people with the necessary information.

Through the 1960s and 1970s, an upsurge in empirical research on organizations extended and tested the open-systems and contingency-theory approaches and added new contingencies to the set. Many of these studies took place in public and nonprofit organizations. Peter Blau and his colleagues (Blau and Schoenherr, 1971) reported a series of studies—of government agencies, actually—showing relationships between organizational size and structure. These and other studies added size to the standard set of contingencies. Hage and Aiken (1969) reported on a series of studies of social welfare agencies that provided evidence that routineness of tasks, joint programs among organizations, and other factors were related to organizational structure and change. In England, a team of researchers (Pugh, Hickson, and Hinings, 1969) conducted what became known as the Aston studies—a major effort at empirical measurement of organizations—and developed an empirical taxonomy, grouping organizations into types based on the measured characteristics. They interpreted differences in their taxonomic categories as the results of differences in age, size, technology, and external auspices and control. (Chapter Eight discusses important implications of these studies for theories about public organizations.) Child (1972) pointed out that in addition to the other contingencies that contingency theorists emphasized, managers' strategic choices play an important role in adapting organizational structure. These and numerous other efforts had by the mid-1970s established the contingency approach—the argument that organizational structures and processes are shaped by contingencies of technology, size, environment, and strategic choice—as the central school or movement in organization theory. Authors began to translate the contingency observations into prescriptive statements for use in "organizational design" (Galbraith, 1977; Starbuck and Nystrom, 1981; Mintzberg, 1989; Daft, 2010).

Like the other theories covered in this review and in later chapters, contingency theory soon encountered criticisms and controversies. Researchers disputed how the key concepts should be defined and measured. Different studies produced conflicting findings. Some studies found a relationship between technology and structure, some did not (Hall and Tolbert, 2004). The basic idea that organizations must adapt to conditions they face, through such responses as adopting more flexible structures as they contend with more environmental uncertainty, still serves as a central theme in organization theory (Daft, 2010; Donaldson, 2001; Scott and Davis, 2006) and management practice (Peters, 1987).

The developments in organizational research reviewed here have produced an elaborate field, with numerous professional journals carrying articles reporting analyses of a wide array of organizational topics. These journals and a profusion of books cover organizational structure, environment, effectiveness, change, conflict, communication, strategy, technology, interorganizational relations, and related variables.

In the last two decades, the field has moved in new directions, many of which represent extensions of contingency and open-systems theories, with increased or redirected emphasis on organizational environments (compare Scott and Davis, 2006). Later chapters describe how organization theorists have developed natural selection and population ecology models for analysis of how certain organizational forms survive and prosper in certain environmental settings while others do not (Aldrich, 1979; Hannan and Freeman, 1989; Hall and Tolbert, 2004; Scott and Davis, 2006). Other theorists have analyzed external controls on organizations, with emphasis on organizations' dependence on their environments for crucial resources (Pfeffer and Salancik, 1978).

The research and theory on people and groups in work settings described earlier have similarly led to a proliferation of closely related work, in organizational behavior and organizational psychology, including a similar trend toward elaborate empirical studies and conceptual development during the 1960s and 1970s. Thousands of articles and books have reported work on employee motivation and satisfaction, work involvement, role conflict and ambiguity, organizational identification and commitment, professionalism, leadership behavior and effectiveness, task design, and managerial procedures such as management by objectives and flextime.

As the different fields have progressed, relatively new topics have emerged. In the recent decades a major trend toward adopting Total Quality Management programs in industry and government swept the United States. This wave developed out of writings earlier in the century by some key American authors, such as W. Edwards Deming and Joseph Juran, that had been embraced by the Japanese but virtually ignored in the United States until recently (note that the historical overview in this chapter has said nothing about these authors). The topic of organizational culture has received a lot of attention and is featured in Figures 1.1 and 1.2. Some important earlier authors such as Barnard and Philip Selznick (see Exhibit 2.1) had devoted attention to related themes; in the 1980s, organizational culture surged to prominence in the management literature. Advances in technology—especially computer, information, and communications technology—have presented organizations and managers with dramatic new challenges and opportunities, and researchers have been pressing to develop the theoretical and research grounding needed to understand and manage these developments. The increasing presence in the workforce of women and racial and ethnic groups that were severely underrepresented in the past has given rise to a body of literature focusing on diversity in organizations (Golembiewski, 1995; Ospina, 1996) and feminist organization theory (Hult, 1995). Later chapters give more attention to many of these recent topics.

The Quiet Controversy over the Distinctiveness of Public Organizations and Management in Organization Theory

The rich field of organization theory provides many valuable concepts and insights on which this book draws. It also raises an important issue for those interested in public organizations and public management: Have the characteristics of public organizations and their members been adequately covered in this voluminous literature? Has it paid sufficient attention to the governmental and political environments of organizations, which seem so important for understanding public organizations? As mentioned in Chapter One and further described in later chapters, there has been literature on public bureaucracies for many years, but the historical review provided here illustrates how little attention has been devoted to this literature by most of the organization theorists. In fact, many organization theorists have paid so little attention to a distinction between public and private organizations that any controversy over the matter remains quiet in most major journals on organization theory and outside of public administration journals. Implicitly, many organization theorists convey the message that we need no real debate, because the distinction lacks importance.

The analysts discussed in the preceding historical review have either concentrated on industrial organizations or sought to develop generic concepts and theories that apply across all types of organizations. For example, even though Peter Blau, a prominent organization theorist, published an organizational typology that included a category of "commonweal organizations" very similar to what this book calls *public organizations*, he published empirical studies that downplayed such distinctiveness of organizational categories (Blau and Scott, 1962). Blau and Schoenherr (1971) examined government agencies for his studies of organizational size, but he drew his conclusions as if they applied to all organizations. So have replications of Blau's study (Beyer and Trice, 1979), even though Argyris (1972, p. 10) suggested that Blau may have found the particular relationship he discovered because he was studying organizations governed by civil service systems. Such organizations might respond to differences in size in different ways than do other organizations, such as business firms. When the contingency theorists analyzed environments, they typically concentrated on environmental uncertainty, especially as a characteristic of business firms' market environments, and showed very little interest in political or governmental dynamics in organizational environments.

Providing a more classical example of this tendency, Max Weber argued that his conception of bureaucracy applied to government agencies and private businesses alike (Meyer, 1979). Major figures such as James Thompson (1962) and Herbert

Simon (Simon, Smithburg, and Thompson, 1950) have stressed the commonalities among organizations and have suggested that public agencies and private firms are more alike than different. The contributions to organization theory and behavior described in this review were aimed at the worthy objective of developing theory that would apply generally to all organizations. With some clear exceptions (Blau and Scott, 1962; Scott and Davis, 2006), the theorists repeatedly implied or aggressively asserted that distinctions such as public and private, market and nonmarket, and governmental and nongovernmental offered little value for developing theory or understanding practice. Herbert Simon continued to offer such observations until the end of his life. He contended that public, private, and nonprofit organizations are essentially identical on the dimension that receives more attention than virtually any other in discussions of the unique aspects of public organizations—the capacities of leaders to reward employees (Simon, 1995, p. 283, n. 3). He also bluntly asserted that it is false to claim "that public and nonprofit organizations cannot, and on average do not, operate as efficiently as private businesses" (Simon, 1998, p. 11). So one of the foremost social scientists of the twentieth century shows little sympathy for the distinction we have to develop in the next chapter.

Even so, research and writing about public bureaucracies had been appearing for many decades when many of these studies were published, and they were related to organizational sociology and psychology in various ways. They developed separately from organizational sociology and psychology, however. Political scientists or economists did the writing on public bureaucracies. They usually emphasized the relationship between the bureaucracy and other elements of the political system. The economists concerned themselves with the effects of the absence of economic markets for the outputs of public bureaucracies (Downs, 1967; Niskanen, 1971). The organizational sociologists and psychologists described in this chapter, although interested in environments, paid relatively little attention to these political and economic market issues. As noted, they worked much more intensively on internal and managerial dimensions—organizational structure, tasks and technology, motivation, and leadership.

Authors interested in the management of public organizations began to point to this gap between the two literatures (Rainey, 1983). As mentioned in Chapter One and described in more detail in Chapter Three, various authors cited in this book mounted a critique of the literature on organization theory, saying that it offered an incomplete analysis of public organizations and the influences of their political and institutional environments (Wamsley and Zald, 1973; Warwick, 1975; Meyer, 1979; Hood and Dunsire, 1981; Pitt and Smith, 1981; Perry and Kraemer, 1983). Yet they also complained that the writings on public bureaucracy were too anecdotal and too discursively descriptive, lacking the systematic empirical

and conceptual analyses common in organization theory. Also, the literature on public bureaucracies showed too little concern with internal structures, behavior, and management, topics that had received extensive attention from researchers in organizational sociology and psychology and from general management analysts. Researchers began to provide more explicit organizational analyses of the public bureaucracy, of the sort described in this book. As Chapter One mentioned, recently a profusion of books and articles have provided many additional contributions. But all of this activity has actually dramatized, rather than fully resolved, the question of whether we can clarify the meaning of public organizations and public management and show evidence that such categories have significance for theory and practice. Thus the next chapter turns to the challenge of formulating a definition and drawing distinctions.

EXHIBIT 2.1. MAJOR DEVELOPMENTS IN ORGANIZATION AND MANAGEMENT THEORY IN THE TWENTIETH CENTURY.

I. *Classic Theories*. Implied a "one best way" to organize and a "closed-system" view of organizations and the people in them.
   A. *Max Weber (Rational-Legal)*
      - Provided one of the early influential analyses of bureaucracy. Defined its basic characteristics, such as hierarchies of authority, career service, selection and promotion on merit, and rules and regulations that define procedures and responsibilities of offices.
      - Argued that these characteristics grounded bureaucracy in a rational-legal form of authority and made it superior to organizational forms based on traditional authority (such as aristocracy) or charismatic authority. Of these alternatives, bureaucracy provides superior efficiency, effectiveness, and protection of clients' rights.
      - Also argued that bureaucracies are subject to problems in external accountability, as they are very specialized and expert in their areas of responsibility and may be subject to self-serving and secretive behaviors.
   B. *Frederick Taylor (Scientific Management)*
      - Most prominent figure in the Scientific Management movement.
      - Advocated the use of systematic analyses, such as "time-motion" studies, to design the most efficient procedures for work tasks (usually consisting of high levels of specialization and task simplification).
      - Argued that management must reward workers with fair pay for efficient production so that workers can increase their well-being through productivity. This implies that simplified, specialized tasks and monetary rewards are primary motivators.
   C. *Administrative Management School*
      Sought to develop "principles of administration" that would provide guidelines for effective organization in all types of organizations. The principles tended to emphasize specialization and hierarchical control:
      - Division of Work. Work must be divided among units based on task requirements, geographic location, or interdependency in the work process.
      - Coordination of Work. Work units must be coordinated back together, through other principles:
        Span of Control. A supervisor's "span of control" should be limited to five to ten subordinates.
        One Master. Each subordinate (and subunit) should report directly to only one superior.
        Technical Efficiency. Units should be grouped together for maximum technical efficiency based on work requirements, technological interdependence, or purpose.
      - The Scalar Principle. Authority must be distributed in an organization like locations on a scale; as you move higher in the hierarchy, each position must have successively more authority, with ultimate authority at the top.

II. *Redirections, New Directions, and New Insights*. Toward the middle of the century, new authors challenged the previous perspectives and moved the field in new directions.
   A. *Human Relations and Psychological Theories*
      1. *Hawthorne Studies: Motivating Factors*
         While studying physical conditions in the workplace, researchers found that weaker lighting in the workplace did not reduce productivity as predicted. They concluded that the attention they paid to the workers during the study increased the workers' sense of importance, the attention they paid to their duties, and their communication, and this raised their productivity. Other phases of the research indicated that

EXHIBIT 2.1. MAJOR DEVELOPMENTS IN ORGANIZATION AND MANAGEMENT THEORY IN THE TWENTIETH CENTURY, Cont'd.

the work group played an important role in influencing workers to attend to their job and be productive. The studies have come to be regarded as a classic illustration of the importance of social and psychological factors in motivating workers.

2. *Maslow: The Needs Hierarchy*
   Maslow held that human needs and motives fall into a hierarchy, ranging from lower-order to higher-order needs—from physiological needs (food, freedom from extremes of temperature) to needs for safety and security, love and belonging, self-esteem, and finally self-actualization. The needs at each level dominate an individual's motivation and behavior until they are adequately fulfilled, and then the next level of needs will dominate. The highest level, self-actualization, refers to the need to fulfill one's own potential. The theory influenced many other theories, largely due to its emphasis on the motivating potential of higher-order needs.
3. *McGregor: Theories X and Y*
   Drawing on Maslow's theory, McGregor argued that management in industry was guided by "Theory X," which saw workers as passive and without motivation and dictated that management must therefore direct and motivate them. Rejecting the emphasis on specialization, task simplification, and hierarchical authority in the scientific and administrative management movements, McGregor argued that management in industry must adopt new structures and procedures based on "Theory Y," which would take advantage of higher-order motives and workers' capacity for self-motivation and self-direction. These new approaches would include such structures and procedures as job enrichment, management by objectives, participative decision making, and improved performance evaluations.
4. *Lewin: Social Psychology and Group Dynamics*
   Driven out of Europe by Nazism, Kurt Lewin came to the United States and led a group of researchers in studies of group processes. They conducted pathbreaking experiments on the influence of different types of leaders in groups and the influence of groups on groups members' attitudes and behaviors (for example, they documented that a group member is more likely to maintain a commitment if it is made in front of the group).

   This work influenced the development of the field of social psychology and of the group dynamics movement. The group dynamics movement actually developed in two directions. One involved a wave of experimental research on groups in laboratories and organizational settings. For example, a classic study by Coch and French (1948) found that work groups in factories carried out changes more readily if they had participated in the decision to make the change; this study contributed to the growing interest in participative decision making in management. The second direction involved the widespread use of group processes for personal and organizational development, using such methods as encounter groups, "T-groups," and "sensitivity groups."

   Lewin developed ideas about attitude and behavior change, based on "force field analysis" and the concept of "unfreezing, moving, and refreezing" group and individual attitudes and behaviors. These ideas are still used widely in the writing about and practice of organizational development.

B. *Chester Barnard and Herbert Simon*
   1. *Chester Barnard*
      Barnard's sole book, *The Functions of the Executive* (1938), became one of the most influential management books ever written. Departing from the emphases of

EXHIBIT 2.1. MAJOR DEVELOPMENTS IN ORGANIZATION AND MANAGEMENT THEORY IN THE TWENTIETH CENTURY, Cont'd.

the administrative management school, he argued the importance of "informal" organizational structures. An organization is an economy of incentives, in which the executive must obtain resources to use in providing incentives for members to participate and cooperate. The executive must stimulate cooperation and communication and must draw on a complex array of incentives, including not just financial incentives but such rewards as fulfilling mutual values, conferring prestige, affirming the desirability of the group, and others (see Table 9.2).

2. *Herbert Simon*

In his 1946 *Public Administration Review* article "Proverbs of Administration," Simon drew on Barnard's insights to attack the administrative management school. He criticized their "principles" as being more like vague proverbs, in some cases too vague to apply and in some cases contradictory. He called for greater analysis of administrative conditions and behaviors to determine when different principles actually apply.

His book *Administrative Behavior* (1948) pursued these points and called for the scientific study of administrative behavior, with decision making as the central focus. He observed that actual administrative decision making is less rational than many economic theorists had assumed, in that decision makers are less likely to pursue clearly identified and precisely valued goals—with an exhaustive review of alternatives and consistent selection of the path that will maximize goal attainment with minimal expenditure of resources—than such theorists had believed. In fact, administrators' ability to act rationally is often limited by incomplete knowledge and information, limited skills and mental abilities, the inability to predict or anticipate events, and other factors. Instead, they select the best available alternatives after a limited search, using available rules of thumb. Simon later referred to this as "satisficing."

Cyert and March, in a study of business firms reported in *A Behavioral Theory of the Firm* (1963), provided evidence supporting Simon's observations. With others, March's later work along these lines would lead to development of the "garbage can model" of decision making, one of the most prominent current perspectives (see Chapter Seven).

March and Simon's *Organizations* (1958) provided elaborate conceptual frameworks and hypotheses about behavior in organizations, especially about individuals' decisions to join an organization and actively participate in it. Their work influenced the development of empirical research on organizational behavior. Pursuing his interest in decision making, Simon became a leader in research on artificial intelligence—the use of computers to make complex decisions.

Simon's insights about bounded rationality and satisficing, based on his analysis of administrators' challenges in making decisions under conditions of complexity and uncertainty, influenced the development of open-systems and contingency theory (described later). In part because his ideas challenged basic assumptions in much of economic theory, he won the Nobel Prize for economics in 1978.

C. *Organizational Sociology and Bureaucratic Dysfunction*

Following in the tradition of Weber, sociologists began studying the characteristics of organizations and bureaucracies.

1. *Merton (1940): Bureaucratic Structures and Member Personalities*

Some of these authors began to observe that the bureaucratic characteristics Weber had regarded as good could actually lead to bad, or dysfunctional,

EXHIBIT 2.1. MAJOR DEVELOPMENTS IN ORGANIZATION AND MANAGEMENT THEORY IN THE TWENTIETH CENTURY, Cont'd.

conditions when they interacted with human characteristics, such as personalities. Merton (1940), for example, observed that specialization, elaborate rules, and an emphasis on adhering to the rules can lead to "trained incapacity," in which people have trouble with problems that do not fit within the rules of their specialization. Also, "displacement of goals" can occur, in which people worry so much about adhering to the rules that their behavior conflicts with the goals of the organization. In addition, people in different departments may pursue the goals of their department more than those of the overall organization.

2. *Victor Thompson: Bureaupathology*
   Victor Thompson, a public administration scholar, argued that bureaucratic organizations can cause "bureaupathology" in their members, who may become overly concerned with protecting the authority of their office and too impersonal in their relations with clients and other members of the organization.
3. *Selznick: Leadership and Institutionalization*
   Many other scholars studied other organizational processes. Selznick, in *TVA and the Grass Roots* (1966), analyzed the ways in which organizations and their leaders develop relationships with external environments, through such processes as "co-optation," or drawing external groups into the decision-making processes of the organization to gain their support. In *Leadership and Administration* (1957), he analyzed the ways in which leaders develop their organizations as "institutions," by influencing the organizational environment, setting major directions for the organization, and supporting these efforts through recruiting, training, and other enhancements of the organization's capacity.
4. *Kaufman: Socialization*
   In his study *The Forest Ranger* (1960), Kaufman analyzed the ways in which the U.S. Forest Service developed the commitment of forest rangers and coordinated the activities of its widely dispersed employees through socialization processes that developed shared values and through accepted rules and procedures.

III. *Relatively Recent Developments*

A. *Organizational Behavior and Organizational Psychology*
   The analysis of humans in organizations just described has led to the development of an elaborate body of theory and research on topics such as the psychology of individuals in organizations, work motivation, and work-related attitudes such as job satisfaction (Chapter Ten), leadership (Chapter Eleven), and group processes in organizations (Chapter Twelve). The group dynamics movement described earlier has contributed to developing a body of knowledge about organizational development (Chapter Thirteen). These bodies of research, theory, and practice provide an understanding of human behavior and psychology in organizations that far exceeds what the "classic" theories can offer.

B. *Organization Theory and Design*
   The stream of sociological research on organizations described here contributed to a burgeoning field of theory and research on large organizations that has taken many directions and covered many topics in recent years.

   1. *Adaptive Systems and Contingency Theory*
      One major development—the adaptive-systems perspective—has supplanted the classic view of organizations as machinelike, closed systems with one proper way of organizing. This perspective regards organizations as being varied in their

EXHIBIT 2.1. MAJOR DEVELOPMENTS IN ORGANIZATION AND MANAGEMENT THEORY IN THE TWENTIETH CENTURY, Cont'd.

characteristics because of their needs to adapt to the conditions they face. Contingency theories developed the idea that organizations vary between more bureaucratized, highly structured entities and more flexible, loosely structured entities, depending on such contingencies as the nature of their operating environment, their tasks and technologies, their size, and the strategic decisions made by their leadership. The following are examples of influential adaptive systems and contingency-theory studies and analyses:

- Burns and Stalker (1961), in their research on firms in Great Britain, found that the managerial and structural characteristics of the most successful firms were different in different industries. In industries where the operating environments (competitors, prices, products, technologies) of the firms were stable and predictable, "mechanistic" organizations with classic bureaucratic structures performed well. In industries where these environments were rapidly changing and complex, more flexible, loosely structured, "organic" organizations performed best.
- Joan Woodward (1965), in studying firms in Great Britain, found that the most effective firms in particular industries did not have the same structural characteristics as the most effective firms in other industries. Rather than there being one best pattern of organization for all industries, the study indicated that the most effective pattern depended on the requirements raised by technological aspects of the work in each industry.
- Lawrence and Lorsch (1967), in a study of businesses in the United States, found that the best-performing firms have structures that are as complex as their environment. Firms in environments with low levels of uncertainty (more predictable, less complex) operate well with less complex internal structures. Firms in more uncertain, less predictable, more complex environments have higher levels of differentiation (variation among units) and integration (arrangements for coordinating units, such as task forces or liaison roles).
- Peter Blau and his colleagues (e.g., Blau and Schoenherr, 1971) conducted a series of studies that showed that organizational size has an important relationship to organizational structure.
- Katz and Kahn (1966) published an influential book analyzing organizations as systems.
- James Thompson (1967) published a highly influential analysis of organizations that integrated the closed- and open-systems perspectives. Drawing on Simon's observations about the challenges of decision making under conditions of bounded rationality, Thompson observed that "dominant coalitions" in organizations strive to set up closed-system conditions and rational decision-making processes, but that as tasks, technologies, environmental conditions, and strategic decisions produce more complexities and uncertainties, organizations must adapt by adopting more flexible, decentralized structures and procedures.

2. *Extensions to Organization Theory*

Later discussions describe many extensions to the adaptive-systems perspective, such as new theories about the effects of organizational environments (Chapter Four) and more dynamic or adaptive management processes, such as organizational culture and market-type arrangements (Chapter Eleven).