

uated. But at the same time, the perspectives selected are not just of historical interest. Each has shown great resilience and has been invented and reinvented over time so that each has persisted as an identifiable, analytic model. In our discussion, we try to do justice to both moments: the historically specific versions and the underlying analytically enduring features. In their pure form, the perspectives share many of the features of paradigms as described by Kuhn in his influential essay on scientific revolutions. Kuhn describes paradigms as “models from which spring particular coherent traditions of scientific research” (1962: 10).

The three perspectives to be considered are the rational, the natural, and the open system perspectives. They are presented in the order of their emergence. For each, we first discuss the basic model that forms its core. Then we describe three or four representative theorists or schools within that tradition. Each discussion concludes with an evaluation of the contributions and limitations of the perspective. Chapter 2 reviews the rational system perspective, following its development from Taylor to Simon. In Chapter 3, we describe the natural system perspective, tracing developments from early in this century, beginning with Michels, up to the work of Parsons. And Chapter 4 reviews the open system perspective, from its origins in the general systems theory as advanced by Bertalanffy through its application to organizations by analysts ranging from Boulding to Weick. Most of the work reviewed in these introductory chapters extends only through the 1960s.

Beyond this point, matters become more complex and, we think, more interesting. There have been a number of attempts to combine the perspectives into more complex models. In Chapter 5 we review three of these integrative efforts by other theorists and propose a fourth of our own. Combining the perspectives provides a framework that enables us to locate conceptually a number of the more important, recent theoretical developments, including transactions costs, resource dependency, population ecology, knowledge-based theories, Marxist approaches, and institutionalization theory, in a broader analytic framework.

Organizations as Rational Systems

A well-designed machine is an instance of total organization, that is, a series of interrelated means contrived to achieve a single end. The machine consists always of particular parts that have no meaning and no function separate from the organized entity to which they contribute. A machine consists of a coherent bringing together of all parts toward the highest possible efficiency of the functioning whole, or interrelationships marshalled wholly toward a given result. In the ideal machine, there can be no extraneous part, no extraneous movement; all is set, part for part, motion for motion, toward the functioning of the whole. The machine is, then, a perfect instance of total rationalization of a field of action and of total organization. This is perhaps even more quickly evident in that larger machine, the assembly line.

JOHN WILLIAM WARD (1964)

From the rational system perspective, organizations are instruments designed to attain specified goals. How blunt or fine an instrument they are depends on many factors that are summarized by the concept of rationality of structure. The term *rationality* in this context is used in the narrow sense of technical or functional rationality (Mannheim, 1950 trans.: 53) and refers to the extent to which a series of actions is organized in such a way as to lead to predetermined goals with maximum efficiency. Thus, rationality refers not to the selection of goals but to their implementation. Indeed, it is perfectly possible to pursue irrational or foolish goals by rational means. Captain Ahab, in Melville's classic *Moby Dick*, chases the white whale across the seven seas musing: “All my means are sane, my motive and my object mad.” Nazi Germany provides a more terrible, nonfiction example. Adolf Hitler's insane objective of eradicating Europe's Jewish population was efficiently pursued by hosts of functionaries like Adolph Eichmann. He took the goal as given and worked faithfully to rationally bring it about, illustrating in Arendt's (1963) phrase “the banality of evil.” It is essential to keep in mind the restricted definition of rationality used within the rational system perspective.

THE DEFINING CHARACTERISTICS

From the standpoint of the rational system perspective, the behavior of organizations is viewed as actions performed by purposeful and coordinated agents. The language employed connotes this image of rational calculation; terms such as *information*, *efficiency*, *optimization*, *implementation*, and *design* occur frequently. But other, somewhat different terms also occur, including *authority*, *control*, *coordination*, *rules*, *directives*, and *performance programs*. These terms suggest the cognitive and motivational limitations of individuals and the constraints imposed upon their choices and actions within organizations. They posit that rational behavior within organizations takes place within—some some analysts would argue, because of—clearly specified limits.

It is no accident that the key features of organizations emphasized by rational system theorists are the very characteristics identified as distinguishing organizations from other types of collectivities. Rational system theorists stress goal specificity and formalization because each of these elements makes an important contribution to the rationality of organizational action.

Goal Specificity

Goals are conceptions of desired ends. These conceptions vary in the precision and specificity of their criteria of desirability. Specific goals provide unambiguous criteria for selecting among alternative activities. As viewed by economists or by decision theorists, goals are translated into a set of preference or utility functions that represent the value of alternative sets of consequences. Without clear preference orderings among alternatives, rational assessment and choice are not possible.

Specific goals not only supply criteria for choosing among alternative activities; they guide decisions about how the organization structure itself is to be designed. They specify what tasks are to be performed, what kinds of personnel are to be hired, and how resources are to be allocated among participants. The more general or diffuse the goals, the more difficult it is to design a structure to pursue them.

It is important to note, however, that some organizations espouse quite vague and general goals, but in their actual daily operation are guided by relatively specific goals that do provide criteria for choosing among alternative activities and for designing the organization structure itself. Consider the case of education. Although both educators and laypeople will argue endlessly about the true function of education and about the virtues of liberal arts versus more practical types of programs, within a given school there exists considerable agreement on such matters as what disciplines should be represented among the faculty, what courses will count toward graduation (or, at least, who has the right to make these decisions), and how many units are required for a student to graduate. With agreement on such matters as these, administrators can safely allow the faculty occasionally to debate the ultimate aims of education. Similarly, although physicians cannot agree on abstract definitions of health or illness, they successfully organize their work around such proximate outcomes as relieving pain and prolonging life.

Vague goals do not provide a solid basis for formal organizations. Either the goals become more specific and limited over time, as often happens, or the structures developed are likely to be unstable and amorphous (see Chapter 11). Collective movements such as radical political sects or protest groups may succeed temporarily in mobilizing resources and participants around vague concepts such as human liberation or environmental protection. Indeed, their generality may broaden their appeal and enlist the support of diverse groups. But such movements are usually sustained and their energy focused by the definition of more specific and limited objectives that can provide the basis for particular organizing efforts. Organizations such as the Sierra Club and Greenpeace gain attention and legitimacy from the broader environmental movement, but carve out limited goals around which to mobilize activities and resources.

The most precise description of the manner in which specific goals support rational behavior in organizations is that developed by Herbert Simon, whose classic, *Administrative Behavior*, first appeared in 1945. His ideas on this subject are summarized later in this chapter as an example of one of the major contributions to the rational system perspective.

Formalization

All rational system theorists assume the existence and presume the importance of a formalized structure, but few make explicit the contributions that formalization makes to rationality of behavior in organizations. Let us attempt to do so.

Recall that a structure is formalized to the extent that the rules governing behavior are precisely and explicitly formulated and to the extent that roles and role relations are prescribed independently of the personal attributes and relations of individuals occupying positions in the structure. Formalization may be viewed as an attempt to make behavior more predictable by standardizing and regulating it. This, in turn, permits "stable expectations to be formed by such member of the group as to the behavior of the other members under specified conditions. Such stable expectations are an essential precondition to a rational consideration of the consequences of action in a social group" (Simon, 1997: 110).¹

Formalization entails a system of abstraction that, to be of value, should be cognitively adequate—sufficiently accurate and complete to guide action—communicable—transmissible to and transparent to users—and contain an improvement trajectory that enables correction over time (Stinchcombe, 2001). Formality may be viewed as "abstraction plus government" (p. 41).

Formalization may also be viewed as an attempt to make more explicit and visible the structure of relationships among a set of roles and the principles that govern behavior in the system. It enables participants or observers to diagram the social structures and the work flows, allowing them to depict these

¹Simon's basic work, *Administrative Behavior*, first appeared in 1945. However, all our references are to the fourth edition of this work, published in 1997, which contains an extensive new introduction and commentaries on original chapters.

relationships and processes with the possibility of consciously manipulating them—designing and redesigning the division of responsibilities, the flow of information or materials, or the ways in which participants report to one another. As Gouldner notes:

Fundamentally, the rational model implies a "mechanical" model, in that it views the organization as a structure of manipulable parts, each of which is separately modifiable with a view to enhancing the efficiency of the whole. Individual organizational elements are seen as subject to successful and planned modification enactable by deliberate decision. (1959: 405)

Thus, in a fundamental sense, the organizational structure is viewed as a means, as an instrument, which can be modified as necessary to improve performance. Organizational designers and managers draw and redraw the organizational chart; coaches attempt to improve performance by diagramming plays and giving chalk talks; and consultants are employed to recommend better arrangements for achieving business goals. Over the last several decades, highly technical managerial systems, such as management by objectives (MBO); planning, programming, and budgeting systems (PPBS); program evaluation review techniques (PERT)—all designed to provide greater visibility and, hence, greater accountability for the critical work flows—have been developed and widely adopted to facilitate rational decision making within complex organizational systems (see Haberstroh, 1965; Odione, 1965; Drucker, 1976; Waring, 1991; Wildavsky, 1979: 26–40).

Formalization can contribute to rationality in other, less obvious ways. In addition to making behavior more available for conscious design, the structuring of expectations prior to interaction carries with it another distinct advantage. Laboratory research by Bales (1953) documents the strains and tensions generated when a status structure begins to emerge among individuals who entered the situation as presumed status equals. These status battles and their associated interpersonal tensions are reduced by the prestructuring of differentiated role expectations in which an individual is assigned a role prior to his or her participation. Thus, in an experimental study, Carter and his colleagues (1953) found that group leaders who had been appointed to their position by the experimenter spent less time attempting to assert their power and defend their position and encountered less resistance to their leadership efforts than did leaders who emerged through interaction processes (see also Verba, 1961: 161–72).

Formalization also serves to "objectify" the structure—to make the definitions of roles and relationships appear to be both objective and external to the participating actors. Such qualities contribute substantially to the efficacy of these systems in controlling behavior. A series of experiments conducted by Zucker (1977) demonstrates this effect. Subjects placed in an ambiguous situation were much more likely to accept influence from another when that person was defined as holding a specified organizational position (not, by the way, a position of authority but simply a named office) than when the person was described simply as "another person." Formalization, hence, works to legitimate inequalities in hierarchies.

In informal groups, the social cement that binds and regulates activities and interactions is the *sociometric* structure—the patterning of affective ties among participants. The creation of a formal structure constitutes an important functional alternative to the sociometric structure. With formalization, the smooth functioning of the organization is to some degree made independent of the feelings—negative or positive—that particular members have for one another. As Merton (1957: 195) notes, "formality facilitates the interaction of the occupants of offices despite their (possibly hostile) private attitudes toward one another." Indeed, many organizations discourage the development of positive sentiments among their members for fear that such emotional ties will undermine discipline and judgment and interfere with attempts to deploy participants rationally.

Formalization makes allowances for the finitude and inconstancy of human actors. The process of *succession*—the movement of individuals into and out of offices—can be routinized and regularized so that one appropriately trained person can replace another with minimal disturbance to the functioning of the organization. In this sense, organizations can—although few actually do—achieve a kind of immortality. The Roman Catholic church provides a notable example.

Formalized structures are thus rendered independent of the participation of any particular individual. A related consequence is that it becomes less essential to recruit unusually gifted individuals for the key positions. The power and influence of leaders can be determined in part by the definition of their offices and not made to depend on their personal qualities—their charisma. In his discussion of political structures, MacIver notes:

The man who commands may be no wiser, no abler, may be, in some sense no better than the average of his fellows; sometimes, by any intrinsic standard, he is inferior to them. Here is the magic of government. (1947: 13)

More generally, here is the magic of formalization! To explain more clearly the alchemy of this process, Wolin draws an analogy between the formalization of structure and scientific method:

Method, like organization, is the salvation of puny men, the compensatory device for individual foibles, the gadget which allows mediocrity to transcend its limitations.... Organization, by simplifying and routinizing procedures, eliminates the need for surpassing talent. It is predicated on "average human beings." (1960: 383)

In the highly formalized organization, the innovating entrepreneur is supplanted by a corps of administrators and technical specialists. Leadership, even innovation, is routinized and regularized by being incorporated into the formal structure (Schumpeter, 1947; Galbraith, 1967).

All of this may come as rather a surprise to contemporary readers, most of whom are inclined to stress the inadequacies of formalization—its rigidity, its ineptness, its tendency to elevate form over substance. Many observers, including sociologists, have concluded that "formality is all a fraud" (Stinch-

combe, 2001: 1). However, rational system theorists insist that, while formal routines do not always work and may sometimes be corrupted, they represent a powerful tool to improving rationality of action. Stinchcombe argues:

The unpopularity of formality in social life is due to the fact that it has been understood by its pathologies. When it works properly it achieves the ends it was built for; the substantive ends that people have decided to pursue. When formality pursues ends alien to us, it is in general because those are the ends of others. It is not the formality that is at fault, but the politics that delivers formal powers to others. (2001: 17)

Note that in describing the contributions of formalization to rational functioning of the organization, emphasis has been placed simply on formalization *per se*—on the existence of role specifications—without attention to content, to the particular rules prescribing preferred behaviors. Most rational system theorists, examples of which are described in the following section, assume the importance of formalization and devote their energies to developing precise guidelines to govern participants' activities. They attempt to describe or to prescribe principles that will be conducive to rational organizational behavior.

SELECTED SCHOOLS

The preceding discussion represents an effort to distill the central elements characterizing the rational system perspective. As noted, this perspective does not reflect a unitary theory but encompasses a set of generically related but distinctive approaches. Four such approaches will be briefly described: Taylor's scientific management; administrative theory as developed by Fayol and others; Weber's theory of bureaucracy; and Simon's theory of administrative behavior.

Taylor's Scientific Management

The scientific management approach received its primary impetus from the work of Frederick W. Taylor (1911) in the late nineteenth and early twentieth centuries but was carried forward by the contributions of others, such as Frank and Lillian Gilbreth, Henry Gantt, and Charles Bedeaux. Taylor's work may be viewed as the culmination of a series of developments occurring in the United States between 1880 and 1920 in which engineers took the lead in endeavoring to rationalize industrial organizations (Shenhav, 1995; 1999). With the maturation of the industrial revolution, engineers, particularly mechanical engineers, began to promote rationalization of practice through standardization of, first, "fittings, screws, nuts, [and] bolts" and, subsequently, "the human element in production" (Calvert, 1967: 178; see also Noble, 1977: 83). The extension of standardization principles to workers was associated with an increase in industrial unrest during the period 1900 to 1920 (Shenhav 1995), whether as cause or effect is less clear. Unlike similar developments in Europe, the drive toward "systematization" in the United States appeared to be largely a professional project rather than one championed by the state (Guillén, 1994).

Taylor and his followers insisted that it was possible to analyze tasks performed by individual workers scientifically in order to discover those procedures that would produce the maximum output with the minimum input of energies and resources. Efforts were concentrated on analyzing individual tasks, but attempts to rationalize labor at the level of the individual worker inevitably led to changes in the entire structure of work arrangements. Ward describes the sequence of changes that resulted from Taylor's efforts to improve the efficiency of performing such menial tasks as shoveling coal and iron ore in a steel mill:

First, a variety of kinds of shovels had to be designed to handle different kinds of materials. That also meant building shovel rooms in the various parts of the yard, so that a gang would have the proper tools at hand. To eliminate the waste motion of wandering about so large a yard, it meant, as Taylor said, "organizing and planning work at least a day in advance," so that when men checked in, they would be at that day's work. This meant, Taylor reported, building a labor office for a planning staff—a bureaucracy, as we would say. Large maps of the yard were then necessary to show at a glance the location of different kinds of work and the location of men. Furthermore, the installation of a telephone network was essential for more effective interior communication. Once the yard was mapped so that one could see at a glance the relationships in time and sequence between different jobs, it led, naturally enough, to the reorganization of the yard itself, so that materials could be delivered or dumped in a more logical sequence.

One can see readily enough what happened. Taylor's attempt to make the crudest physical act of labor efficient led inexorably to a further organization of every aspect of the production process. (Ward, 1964: 64–65)

It was not only, or even primarily, the lot of workers that was to be altered by the introduction of scientific management: the role of management was also to be transformed. Taylor aspired to replace the arbitrary and capricious activities of managers with analytical, scientific procedures:

Under scientific management arbitrary power, arbitrary dictation, ceases; and every single subject, large and small, becomes the question for scientific investigation, for reduction to law....

The man at the head of the business under scientific management is governed by rules and laws which have been developed through hundreds of experiments just as much as the workman is, and the standards which have been developed are equitable. (Taylor, 1947: 211, 189)

The activities of managers and workers were to be rationalized; both were equally subject to the regimen of science.

Taylor believed that the adoption of scientific management principles by industrial concerns would usher in a new era of industrial peace. The interests of labor and management would be rendered compatible. Workers could be scientifically selected to perform those tasks for which they were best suited. Scientifically determined procedures would allow them to work at peak efficiency, in return for which they would receive top wages.

Once work was scientifically plotted, Taylor felt, there could be no disputes about how hard one should work or the pay one should receive for labor. "As reasonably might we insist on bargaining about the time and place of the rising and setting sun," he once said. (Bell, 1960: 228)

Managers would cooperate with workers in devising appropriate work arrangements and pay scales and enjoy the fruits of maximum profits.

Many of the elements that Taylor pioneered were employed to provide the basis for the mass production technologies—known after their most famous exemplar, Henry Ford, as "Fordism"—which represented the high-water mark of the industrial revolution. To Taylor's meticulous time-motion study and perfection of each worker movement, Ford added the specialized machines, interchangeable parts, simplified modes of assembly, and conveyor belts that greatly enhanced the productivity of workers turning out standardized products for mass markets (Womack, Jones, and Roos, 1991: 26–38). Zuboff summarizes the key elements of Fordism:

This formula has dominated the design of mass-production techniques throughout the twentieth century. Effort is simplified (though its pace is frequently intensified) while skill demands are reduced by new methods of task organization and new forms of machinery. (1988: 47)

Taylor was also a leader in formulating the elements of what Cole (1994) has termed the "traditional quality paradigm." This approach stressed the "importance of identifying work tasks and then making that method the standard," together with an emphasis on inspection, involving elaborate designs to ensure that the inspectors' activities were themselves subject to careful review. In contrast to the contemporary emphasis on total quality management (TQM), which we discuss in Chapter 13, the traditional approach devised by Taylor and others viewed quality as a specialized staff function and embraced "an inspection-oriented rather than a prevention-oriented approach" (Cole 1994: 69; see also Cole, 1999).

The underlying spirit of Taylor's approach—an amalgam of the Protestant ethic, social Darwinism, and a faith in technical expertise—struck an important nerve that continues to reverberate up to the present time.

Taylor bequeathed a clockwork world of tasks timed to the hundredth of a minute, of standardized factories, machines, women, and men. He helped instill in us the fierce, unholy obsession with time, order, productivity, and efficiency that marks our age. (Kanigel, 1997: 7)

Still, he and his methods were anathema to workers and to many managers. Workers and their unions resisted time-study procedures and attempts to standardize every aspect of their performance. They rejected incentive systems requiring them to perform continuously at a peak level of efficiency. Managers, for their part, increasingly were disquieted by Taylor's vision of their role.

After all, Taylor had questioned their good judgment and superior ability which had been the subject of public celebration for many years. Hence, many employers

regarded his methods as an unwarranted interference with managerial prerogatives. (Bendix, 1956: 280)

Given the increasing resistance of both managers and workers, scientific management has persisted more in the guise of a set of technical procedures than as an overarching managerial ideology (Guillén, 1994: 48–58).²

Fayol's Administrative Theory

A second approach, developing concurrently with scientific management, emphasized management functions and attempted to generate broad administrative principles that would serve as guidelines for the rationalization of organizational activities. Whereas Taylor and his fellow engineers proposed to rationalize the organization from the "bottom up"—changes in the performance of individual tasks affecting the larger structure of work relations—the administrative management theorists worked to rationalize the organization from the "top down." Henri Fayol, a French industrialist writing in the early part of this century, was one of the earliest exponents of this approach, but his ideas did not become widely available in this country until 1949, when his major work was translated. Influential participants in this movement in the United States included two General Motors executives, Mooney and Reiley (1939), whose treatise on management principles gained a wide following, and Gulick and Urwick, who in 1937 collaborated to edit the volume *Papers on the Science of Administration*.

The various contributors to this perspective did not reach agreement as to the number of principles required or the precise formulation of many specific principles, but there was considerable consensus on the importance of two types of activities: coordination and specialization (Massie, 1965).

- The major principles developed to guide *coordination* activities include the scalar principle, which emphasizes the hierarchical organizational form in which all participants are linked into a single pyramidal structure of control relations; the unity-of-command principle, specifying that no organizational participants should receive orders from more than one superior; the span-of-control principle, which emphasizes that no superior should have more subordinates than can be effectively overseen (theorists were unable to agree on the precise number of subordinates who could be supervised); and the exception principle, which proposes that all routine matters be handled by subordinates leaving superiors free to deal with exceptional situations to which existing rules are inapplicable.
- *Specialization* issues include decisions both about how various activities are to be distributed among organizational positions and about how such positions can most effectively be grouped into work units or departments. Among the principles espoused to guide these types of decisions is the departmentalization prin-

²Perhaps the most useful statement of Taylor's conception is contained in his testimony before the Special House Committee to Investigate the Taylor and Other Systems of Shop Management in 1912. This testimony is reprinted in Taylor (1947). Summaries of and commentaries on his contribution will be found in Bell (1960: 222–37), Bendix (1956: 274–81), and Guillén (1994: 40–58). Kanigel (1997) provides a detailed biography and an assessment of the wider impact of Taylor's work, and Waring (1991) details his enduring legacy. A severe critique of Taylor's approach from a Marxist perspective is provided by Braverman (1974: 85–138).

ple, which maintains that activities should be grouped so as to combine homogeneous or related activities within the same organizational unit. Homogeneity might be based on similarity of purpose (activities contributing to the same sub-goal—for example, marketing), process (activities requiring similar operations—for example, computer programming), clientele (activities performed on the same set of recipients—for example, a medical team organized around the care of a specific group of patients), or place (for example, services provided to individuals in a given geographical territory). Also proposed is the line-staff principle in which “line” activities, those directly concerned with achieving organizational goals, are distinguished from “staff” activities, consisting of advice, service, or support. Staff units are to be segregated from the scalar organization of power and made responsible and subordinate to appropriate line units.

Note the heavy emphasis on formalization implicit in these principles. Careful specification of work activities and concern for their grouping and coordination is the hallmark of the formalized structure. Mooney makes explicit this call for formalization by distinguishing between jobs (positions) and the person on the job:

In every organization there is a collective job to be done, consisting always of the sum of many individual jobs, and the task of administration, operating through management, is the co-ordination of all the human effort necessary to this end. Such co-ordination, however, always presupposes the jobs to be coordinated. The job as such is therefore antecedent to the man on the job, and the sound co-ordination of these jobs, considered simply as jobs, must be the first and necessary condition in the effective co-ordination of the human factor. (1937: 92)

The more astute administrative theorists recognized that their managerial principles furnished at best only broad guidelines for decision making. Thus, Fayol reminds practitioners:

The soundness and good working order of the body corporate depends on a certain number of conditions termed indiscriminately principles, laws, rules. For preference I shall adopt the term principles whilst dissociating it from any suggestion of rigidity, for there is nothing rigid or absolute in management affairs, it is all a question of proportion. Seldom do we have to apply the same principle twice in identical conditions; allowance must be made for different changing circumstances. (1949 trans.: 19)

And Gulick cautions:

Students of administration have long sought a single principle of effective departmentalization just as alchemists sought the philosopher's stone. But they have sought in vain. There is apparently no one most effective system of departmentalism. (Gulick and Urwick, 1937: 31)

In spite of such disclaimers, the managerial principles enunciated by the administrative theorists soon drew considerable criticism. Many of the attacks came from natural system proponents (see Chapter 3), but a good deal of the fire came from other rational system theorists on the ground that the so-called

principles were mere truisms or commonsense pronouncements (Massie, 1965: 406). No doubt the most devastating critique was provided by Herbert Simon whose classic, *Administrative Behavior*, commenced with “an indictment of much current writing about administrative matters” (1997: 43). He examines one principle after another, observing that many occur in pairs that are, on close inspection, contradictory; others lack specificity or reveal “a deceptive simplicity—a simplicity that conceals fundamental ambiguities” (p. 30).

Without gainsaying any of these criticisms, we can admire what the administrative theorists attempted to do. They were pioneers in identifying the fundamental features of formal organizational structure, audaciously clinging to the view that all organizations contain certain common structural characteristics. They raised the level of analysis to focus not on individual behavior but on organization structure. With the improved vision of hindsight, it is now apparent that their search for general principles was confounded in part by their failure to develop conditional generalizations—statements that specify the limits of their applicability to particular situations or types of organizations.³

Weber's Theory of Bureaucracy

Our consideration of Weber's work must begin with an important disclaimer. Although Weber's writings had a profound influence on the development of organization theory in the United States from the time when they were first translated into English, because his arguments were available in disconnected fragments, they were taken out of context and incorrectly interpreted. As Collins (1986: 286) has observed:

there is nothing better known in the field of organizations, perhaps in all of sociology, than Weber's model of bureaucracy. It also happens that there is no more complete misunderstanding of a major sociological theory than the way Weber's organizational theory was treated in American sociology.

Early interpretations of Weber's work were flawed in two major respects. First, his famous depiction of the central features of rational-legal “bureaucratic” structures was decontextualized, taken out of historical context and treated as a kind of caricature of modern administration forms. Second, most of his arguments were interpreted as belonging within the framework of conventional technical rationality, whereas his conception was more complex, paving the way to an alternative conception of rationality. We begin our review by attempting to place Weber's work back in its proper historical context.

Max Weber, the influential German sociologist/political economist, was a contemporary of Taylor and Fayol's but working along quite different lines. Weber's analysis of administrative structures was only a limited segment of his much larger interest in accounting for the unique features of Western civilization (see Bendix, 1960; Swedberg, 1998). In his view, what was distinctive was the growth of rationality in the West, and his active mind roamed across legal, religious, political, and economic systems, as well as administrative structures,

³This is the major insight that underlies the contingency theory of organizations, described in Chapter 4.

as he searched for materials to test and extend his notions by comparing and contrasting differing cultures and historical periods. Weber's analysis of administrative systems can be fully appreciated only if it is seen in this larger context, since his listing of the structural characteristics of bureaucracy was generated in an attempt to differentiate this more rational system from earlier forms.

Authority. In his justly famous typology, Weber distinguishes three types of authority:

- *Traditional authority*—resting on an established belief in the sanctity of immemorial traditions and the legitimacy of those exercising authority under them
- *Rational-legal authority*—resting on a belief in the "legality" of patterns of normative rules and the right of those elevated to authority under such rules to issue commands
- *Charismatic authority*—resting on devotion to the specific and exceptional sanctity, heroism, or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by him or her (1968 trans.: vol. 1: 212-301)

For Weber, differences in authority were based on differences in the beliefs by which legitimacy is attributed to an authority relation (see the discussion of power and authority in Chapter 11). Each authority type is associated with a distinctive administrative structure. Traditional authority gives rise to the particularistic and diffuse structures exemplified by patrimonial systems, including gerontocracy, patriarchalism, and feudalism⁴ (see Dibble, 1965; Swedberg, 1998: 62-70). The simplest way to visualize a patrimonial system is as a household writ large: an estate or production organization governed by a ruler-owner who in managing the enterprise relies for assistance on a variety of dependents, ranging from slaves to serfs to sons. Rational-legal authority provides the basis for the more impersonal specific and formal structures of which the most highly developed form is the modern bureaucracy. And charismatic authority is associated with the "strictly personal" relations linking an impressive leader with his or her devoted coterie of followers or disciples.

In Weber's view, only traditional and rational-legal authority relations are sufficiently stable to provide a foundation for permanent administrative structures. And, during recent centuries, particularly in Western societies, traditional structures are viewed as gradually giving way to rational-legal structures, most notably in "the modern state" and in "the most advanced institutions of capitalism," due to their "purely technical superiority over any other form of organization" (Weber, 1946 trans.: 196, 214).

Charismatic forms arise in periods of instability and crisis when extraordinary measures are called for and seemingly offered by individuals perceived as possessing uncommon gifts of mind and spirit. Lenin, Hitler, Gandhi, Mao, and Martin Luther King are only a few recent examples of such charismatic

⁴Such traditional structures are not simply of historical interest. Many contemporary societies contain various traditional and "neotraditional" elements in their political and economic organizations. For example, Walder (1986) provides an instructive account of such arrangements in contemporary China.

leaders, illustrating their diversity and their power to inspire the fanatical devotion of others around their personal vision of "reform." However, for such movements to persist, they must move in the direction of one or the other stable forms, by establishing "new" traditional structures or new bureaucratic structures.⁵ Charisma becomes routinized: the circle of adherents expands to include more, but less committed, participants; systematic sources of support replace voluntary and heartfelt, but irregular, contributions; personal ties between leader and followers are replaced by more orderly but impersonal arrangements; and rules of succession are developed in recognition of the truth that no one lives forever—not even a superhuman leader.⁶

Bureaucracy. Weber's typology of authority is of interest not only because it underlies his conception of basic changes occurring in administrative systems over time. The distinction between traditional and rational-legal forms also serves as the basis for his influential conception of the characteristics of bureaucratic structures. Before describing Weber's conception, however, it is necessary to comment briefly on the concept of bureaucracy because this term is linked in so many ways. For many, bureaucracy is employed as an epithet, signifying rule-encumbered inefficiency or mindless overconformity (see, for example, Mises, 1944; Parkinson, 1957). While acknowledging that this description fits all too many organizations, we define bureaucracy in a more neutral manner, following the lead of Bendix. He observes:

Seen historically, bureaucratization may be interpreted as the increasing subdivision of the functions which the owner-managers of the early enterprises had performed personally in the course of their daily routine. (1956: 211-12)

Such functions include supervision, personnel selection, accounting and financial management, record keeping, job design, and planning. This definition includes the head of the organization—whether president, dictator, or owner—as well as those who carry out the direct work of the organization: the production and sales personnel. A useful way of thinking about a bureaucracy is that it consists of those positions or activities whose function is to service and maintain the organization itself. In short, we define *bureaucracy* as the existence of a specialized administrative staff. Like formalization and goal specificity, bureaucracy should be viewed as a variable; organizations vary in terms of the proportion of personnel they devote to administration as compared to production and service.

Weber's definition of bureaucracy differs from our own. In his conception, bureaucracy refers to a particular type of administrative structure, developed in association with the rational-legal mode of authority. In many discussions of Weber's work, his model of bureaucracy is depicted as a simple list of administrative characteristics present in bureaucratic forms, characteristics such as:

⁵The art of "inventing" traditions is described by Hobsbawm and Ranger (1988).

⁶Modern political structures typically incorporate charismatically based authority systems at their core. The personal staff of contemporary political leaders—presidents, governors, senators—exhibit many of the features associated with the leader-disciple model (Hamilton and Biggart, 1984: 15-54).

- Fixed division of labor among participants
- Hierarchy of offices
- Set of general rules that govern performance
- Separation of personnel from official property and rights
- Selection of personnel on the basis of technical qualifications
- Employment viewed as a career by participants

However, his contribution can be better appreciated if these bureaucratic elements are described in relation to the traditional features they supplanted. Thus, according to Weber, bureaucratic systems are distinguished from traditional administrative forms by features such as the following:

- Jurisdictional areas are clearly specified: the regular activities required of personnel are distributed in a fixed way as official duties (in contrast with the traditional arrangement, in which the division of labor is not stable or regular but depends on assignments made by the leader, which can be changed at any time).
- The organization of offices follows the principle of hierarchy: each lower office is controlled and supervised by a higher one. However, the scope of authority of superiors over subordinates is circumscribed, and lower offices enjoy a right of appeal (in contrast with traditional forms, in which authority relations are more diffuse, being based on personal loyalty, and are not ordered into clear hierarchies).
- An intentionally established system of abstract rules governs official decisions and actions. These rules are relatively stable and exhaustive and can be learned. Decisions are recorded in permanent files. (In traditional systems, general rules of administration either do not exist or are vaguely stated, ill-defined, and subject to change at the whim of the leader. No attempt is made to keep permanent records of transactions.)
- The "means of production or administration"—for example, tools and equipment or rights and privileges—belong to the office, not the officeholder, and may not be appropriated. Personal property is clearly separated from official property, and working space from living quarters. (Such distinctions are not maintained in traditional administrative systems since there is no separation of the ruler's personal household business from the larger "public" business under his direction.)
- Officials are personally free, selected on the basis of technical qualifications, appointed to office (not elected), and compensated by salary. (In more traditional administrative systems, officials are often selected from among those who are personally dependent on the leader—for example, slaves, serfs, relatives. Selection is governed by particularistic criteria, and compensation often takes the form of benefices—rights granted to individuals that, for example, allow them access to the stores of the ruler or give them grants of land from which they can appropriate the fees or taxes. Benefices, like fiefs in feudalistic systems, may become hereditary and sometimes are bought and sold.)
- Employment by the organization constitutes a career for officials. An official is a full-time employee and anticipates a lifelong career in the agency. After a trial period he or she gains tenure of position and is protected against arbitrary dismissal. (In traditional systems, officials serve at the pleasure of the leader and so lack clear expectations about the future and security of tenure.) (Weber, 1968 trans.: vol. 2: 956–1005)

When we thus juxtapose Weber's list of bureaucratic characteristics and the related aspects of traditional systems, a clearer view emerges of Weber's central message. He viewed each bureaucratic element as a solution to a problem or defect contained within earlier administrative systems.⁷ Further, each element operates not in isolation but as part of a system of elements that, in combination, is expected to provide more effective and efficient administration. To capture both the notions of distinctive elements and their interrelation, Weber employed what is termed an *ideal-type* construct. This approach attempts to isolate those elements regarded as most characteristic of the phenomenon to be explored. The term *ideal-type* is somewhat misleading, since it does not refer to a normatively preferred type but to the construction of a simplified model that focuses attention on the most salient or distinctive features.

Even though Weber's model of administrative systems emphasized that they were composed of many interrelated factors, in his own analysis he focused primarily on organizations as systems of power or domination in which the leader exercises control over and through a hierarchy of officials who both receive and give orders. It is administration based on discipline; and discipline is "nothing but the consistently rationalized, methodically prepared and exact execution of the received order" (Weber, 1968 trans.: vol. 2: 1149).

In contrasting the rational-legal with the other two (nonrational) types, Weber stressed two seemingly contradictory points. First, the rational-legal form provides the basis for a more stable and predictable administrative structure for both superiors and subordinates. The behavior of subordinates is rendered more reliable by the specificity of their role obligations, the clarity of hierarchical connections, and their continuing dependence on the hierarchy in the short run for income and in the longer term for career progression. And superiors are prevented from behaving arbitrarily or capriciously in their demands made on subordinates.

But, second, the rational-legal structure permits subordinates to exercise "relatively greater independence and discretion" than is possible in the other types of administrative systems (Smith and Ross, 1978). Because obedience is owed not to a person—whether a traditional chief or a charismatic leader—but to a set of impersonal principles, subordinates in bureaucratic systems have firmer grounds for independent action, guided by their interpretation of the principles. They also have a clear basis for questioning the directives of superiors, whose actions are presumably constrained by the same impersonal framework of rules. By supporting increased independence and discretion among lower administrative officials constrained by general administrative policies and specified procedures, bureaucratic systems are capable of handling more complex administrative tasks than are traditional systems. (This argument is amplified in Chapter 10.)

These strengths of rational-legal forms over the more traditional structures have long seemed obvious to observers of administrative structures. It is not too hard to see the advantages to be gained when administrators—whether

⁷For a revealing description of the gradual replacement of a patrimonial by a bureaucratic structure, see Rosenberg's (1958) account of the emergence of the Prussian state during the eighteenth century. This "German" case was, of course, well known to Weber, whose father was a municipal official in Berlin and subsequently a member of both the regional and imperial parliaments (see Weber, 1975 trans.).

in public agencies or private firms—exhibit expertise and make decisions within a framework of rules supporting fairness and consistency, in contrast to officials exhibiting favoritism, corruption, arbitrariness, and inefficiency. Although rational-legal systems began to emerge and diffuse during the late-seventeenth and eighteenth centuries, they continue to spread up to the current time. A study by Evans and Rauch (1999), for example, devised a scale to measure “Weberianness” of a sample of governmental economic agencies for the period 1970-1990. They asked expert observers in thirty-five developing countries to rate the characteristics of these agencies, focusing in particular on their use of meritocratic recruitment criteria and whether officials experienced “predictable, rewarding long-term careers” (p. 749). They found, after taking into account differences in GDP per capita and average years of schooling, that nations exhibiting higher Weberian scores were more likely to experience higher levels of economic growth. Effectiveness of administration matters for the achievement of instrumental goals and governmental bodies have an important role to play in economic development.

Criticism and appreciation. Weber’s analysis of bureaucratic structure, while influential, has also been controversial, and his ideas have been subject to continuing disputation and interpretation. Some critics challenged Weber’s views on authority, which, as we have suggested, play a central role in his analysis of administration systems. Parsons and Gouldner have suggested that Weber tended to conflate two analytically distinguishable bases of authority. On the one hand, in his discussion of the administrative hierarchy of bureaucracies, Weber asserts that authority rests on “incumbency in a legally defined office.” On the other hand, in his discussion of criteria for recruitment and advancement, Weber argues that authority is based on “technical competence” (Parsons, 1947: 58-60). Indeed, at one point Weber states, “Bureaucratic administration means fundamentally the exercise of control on the basis of knowledge” (1947 trans.: 339). Gouldner underlines the contradiction:

Weber, then, thought of bureaucracy as a Janus-faced organization, looking two ways at once. On the one side, it was administration based on discipline. In the first emphasis, obedience is invoked as a means to an end; an individual obeys because the rule or order is felt to be the best known method of realizing some goal.

In his second conception, Weber held that bureaucracy was a mode of administration in which obedience was an end in itself. The individual obeys the order, setting aside judgments either of its rationality or morality, primarily because of the position occupied by the person commanding. The content of the order is not examinable. (1954: 22-23)

One might defend Weber by insisting that there is likely to be a strong positive correlation between a person’s position in the hierarchy and his or her degree of technical competence. Such may have been the case in Weber’s day, when on-the-job experience was a major source of technical competence, but seems far off the mark in today’s world of minute specialization supported by prolonged and esoteric training in institutions separated from the work setting. Thompson convincingly portrays the ever-widening gap between ability and authority in modern organizations, asserting that:

Authority is centralized, but ability is inherently decentralized because it comes from practice and training rather than from definition. Whereas the boss retains his full rights to make all decisions, he has less and less ability to do so because of the advance of science and technology. (1961: 47)

Staff-line arrangements, in which the positional authority of the line administrator is distinguished from the technical expertise of the staff specialist, appear to be not so much a solution to the difficulty (see studies by Dalton [1950; 1959] of staff-line conflict) as a structural recognition of the distinctiveness of the two sources of authority sloughed over in Weber’s analysis.

As previewed at the beginning of our discussion, a number of recent commentators have suggested that early generations of organizational analysts, especially Americans, misread Weber’s work and distorted his views (see Collins 1975; McNeil, 1978; Thompson, 1980). In particular, contemporary Weberian scholars point out that Weber identified a number of types of rationality that his early readers tended to conflate or confuse (see Albrow, 1970; Kalberg, 1980). Early influential interpreters such as Blau (1956) and J. D. Thompson (1967) assumed that Weber equated bureaucratic rationality with efficiency. A closer reading, however, makes it clear that Weber distinguished between technical rationality—emphasizing instrumental means-ends efficiency—and formal rationality, and that he defined bureaucracy as rational primarily in the latter sense. *Formal rationality* refers to the orientation of action to formal rules and laws (Kalberg, 1980: 1158).

At the heart of Weber’s idea of formal rationality was the idea of correct calculation, in either numerical terms, as with the accountant, or in logical terms, as with the lawyer.... Each of the propositions involved in his pure type of bureaucracy referred to a procedure where either legal norms or monetary calculation were involved, and where impersonality and expert knowledge were necessary. Any such procedure was for Weber intrinsically rational, irrespective of its relation to organizational objectives. In short, he was not offering a theory of efficiency, but a statement of the formal procedures which were prevalent in modern administration. (Albrow, 1970: 65)

Employing this conception of formal rationality, Weber recognized the potential for conflict between the abstract formalism of legal certainty on the one hand and objective accomplishments on the other. He understood the difference between, for example, the perfection of legal procedures and the attainment of justice. He realized the possibility that formalization can degenerate into formalism. Most important, he recognized in his work alternative meanings of rationality and, in so doing, anticipated truths that contemporary institutional theorists have rediscovered and amplified (see Meyer, 1990). We pursue these insights in Chapter 6.

Early readers of Weber also failed to recognize his strong ambivalence about the developments he charted: his recognition that bureaucratic forms were capable of growing with an inexorable logic of their own, concentrating great power in the hands of their masters, reducing individual participants to the status of “cog in an ever-moving mechanism,” and having the potential to

imprison humanity in an "iron cage" (Weber, 1946 trans.: 228; 1958 trans.: 181). These concerns are discussed in Chapter 12.

Finally, early conveyers of Weber's work decontextualized it, extracting Weber's ideal-type characterization of bureaucratic structure from its historical context. But, as we will see, Weber was ahead of his time in recognizing the importance of the wider social context on the form and functioning of organizations.

In sum, Weber was clearly a rational system theorist even though early interpreters misconstrued and oversimplified the type of rationality Weber had in mind. While there remains controversy over some aspects of Weber's conceptions and arguments, there is virtually universal agreement that he was the premier analyst of organizations, an intellectual giant whose conceptions continue to shape and enrich our understandings of how and why organizations arose, and how their operation affects the wider social structure.⁸

Simon's Theory of Administrative Behavior

Herbert Simon, both in his early work on administration and in his later collaborative work with March, clarified the processes by which goal specificity and formalization contribute to rational behavior in organizations (Simon, 1997; March and Simon, 1958). We earlier observed that Simon was critical of the platitudes developed by Fayol and others searching for management principles. He also criticized the assumptions made by Taylor and other early theorists about the actors in organizations. For the "economic man" motivated by self-interest and completely informed about all available alternatives, Simon proposed to substitute a more human "administrative man." The latter seeks to pursue his or her self-interests but does not always know what they are, is aware of only a few of all the possible alternatives, and is willing to settle for an adequate solution ("satisfice") rather than attempting to optimize.

Following the lead of Barnard (1938), whose contributions are described in Chapter 3, Simon distinguishes between (1) an individual's decisions to join and to continue to participate in an organization and (2) the decisions an individual is asked to make as a participant in the organization. Only the latter set of decisions is of interest in the present context.⁹ A scientifically relevant description of an organization, according to Simon, details what decisions individuals make as organizational participants and the influences to which they are subject in making these decisions. In general, in Simon's view, organizations both simplify decisions and support participants in the decisions they need to make.

A primary way in which organizations *simplify* participants' decisions is to restrict the ends toward which activity is directed. Simon points out that goals affect behavior only as they enter into decisions about how to behave. Goals supply the value premises that underlie decisions. *Value premises* are assumptions about what ends are preferred or desirable. They are combined in decisions

⁸The secondary literature examining Weber's work is immense, but the discussions of Alexander (1983, vol. 3), Collins (1986), and Swedberg (1998) are particularly insightful.

⁹Factors affecting the first type of decision—the decision to participate—are discussed in Chapter 7 of this volume. See also March and Simon (1958: 52–111).

with *factual premises*—assumptions about the observable world and the way in which it operates. The more precise and specific the value premises, the greater their impact on the resulting decisions, since specific goals clearly distinguish acceptable from unacceptable (or more from less acceptable) alternatives. Typically, participants higher in the hierarchy make decisions with a larger value component, whereas lower participants are more apt to make decisions having a larger factual component. Those closer to the top make decisions about what the organization is going to do; those in lower positions are more likely to be allowed to make choices as to how the organization can best carry out its tasks. Simon (1997: 55–67) insists that quite different criteria of correctness underlie these two classes of decisions: choice of ends can be validated only by fiat or consensus; choice of means can be validated empirically.

Ultimate goals served by organizations are frequently somewhat vague and imprecise. Some organizations exist to develop and transmit knowledge, others to maintain public order, and others to care for and cure patients. Such general goals in themselves provide few cues for guiding the behavior of participants. However, as March and Simon argue, they can serve as the starting point for the construction of *means-ends* chains that involve:

- (1) starting with the general goal to be achieved, (2) discovering a set of means, very generally specified, for accomplishing this goal, (3) taking each of these means, in turn, as a new subgoal and discovering a set of more detailed means for achieving it, etc. (1958: 191)

In this manner, a hierarchy of goals is established in which each level is:

considered as an end relative to the levels below it and as a means relative to the levels above it. Through the hierarchical structure of ends, behavior attains integration and consistency, for each member of a set of behavior alternatives is then weighted in terms of a comprehensive scale of values—the "ultimate" ends. (Simon, 1997: 74)

For example, in a manufacturing organization, an assignment to an individual worker to construct a specific component of a piece of equipment such as an engine provides that worker with an end toward which to direct his or her activities. This end, viewed from the level of his or her supervisor, is only a means toward the creation of the engine. The supervisor's end is to ensure that all parts are available when needed and are correctly assembled to produce the engine. However, this objective, when viewed from the next higher level, is only a means to the end of completing the final product, such as a lawn mower, containing the engine. The completion of all parts and assembly operations required to produce the lawn mower, while an end for the manufacturing division, is only a means at a higher level to the ultimate end of selling the lawn mower for profit to retail outlets. Viewed from the bottom up, the rationality of individual decisions and activities can be evaluated only as they relate to higher-order decisions; each subgoal can be assessed only in terms of its consistency or congruency with more general goals. Viewed from the top down, the factoring of general purposes into specific subgoals that can then be assigned to organizational subunits (individuals or departments) enhances the

possibility of rational behavior by specifying value premises and hence simplifying the required decisions at every level. From this perspective, then, an organization's hierarchy can be viewed as a congealed set of means-ends chains promoting consistency of decisions and activities throughout the organization. Or, as Collins (1975: 316) suggests, March and Simon describe organizational structure "as a nested set of plans for action."

The ultimate goals—making a profit, achieving growth, prolonging life—are those that, by definition, are not viewed as means to ends but as ends in themselves. They may be determined by consensus or by decree. In either case, any challenge to these ultimate objectives is likely to be met with strong resistance. Physicians, for example, are reluctant to consider the merits of euthanasia, and capitalists react with righteous indignation to any questions concerning their right to profits. Apart from any considerations of self-interest, such emotional reactions stem from the half-conscious realization that any challenge to the ultimate objectives calls into question the premises around which the entire enterprise is structured.

In addition to simplifying decisions for participants in all these ways, organizations also *support* participants in the decisions they are expected to make. A formalized structure supports rational decision making not only by parceling out responsibilities among participants but also by providing them with the necessary means to handle them: resources, information, equipment. Specialized roles and rules, information channels, training programs, standard operating procedures—all may be viewed as mechanisms both for restricting the range of decisions each participant makes and for assisting the participant in making appropriate decisions within that range. As Perrow (1986: 128–31) notes, Simon's model of organizational influence stresses "unobtrusive" control of participants: training and channeling of information and attention play a larger role in producing dependable behavior than do commands or sanctions.

Underlying Simon's model of organizational decision making is a conception of cognitive limits on individual decision makers.¹⁰ Simon stresses that:

It is impossible for the behavior of a single, isolated individual to reach any high degree of rationality. The number of alternatives he must explore is too great, the information he would need to evaluate them so vast that even an approximation to objective rationality is hard to conceive. Individual choice takes place in an environment of "givens"—premises that are accepted by the subject as bases for his choice; and behavior is adaptive only within the limits set by these "givens." (1997: 92)

By providing integrated subgoals, stable expectations, appropriate information, necessary facilities, routine performance programs, and, in general, a set

of constraints within which required decisions can be made, organizations supply these "givens" to individual participants. This is the sense in which March and Simon (1958: 169–71) propose the concept *bounded rationality*—a concept that both summarizes and integrates the two key elements of the rational system perspective: goal specificity and formalization.¹¹

Also, in his later collaboration with March, Simon gave substantial emphasis to the importance of rules and routines in supporting rational behavior within organizations. As DiMaggio and Powell (1991:19) stress, "March and Simon (1958) taught us that organizational behavior, particularly decision making, involves rule following more than the calculation of consequences." Thus, Simon, like Weber, was among those who began to identify formal rationality as distinct from technical rationality.

The model developed by Simon also can be used to explain how the very structures developed to promote rationality can, under some conditions, have the opposite effect: subgoals can become disconnected from the wider goals they were intended to serve. These and other sources of organizational pathologies are discussed in Chapter 12.

SUMMARY AND TENTATIVE CONCLUSIONS

Any conclusions reached at this point must be tentative; it is difficult to appraise the strengths and limitations of any one perspective in isolation from the others. Nevertheless, a few general observations on the rational system approach can be made at this juncture.

From the rational system perspective, structural arrangements within organizations are conceived as tools deliberately designed to achieve the efficient realization of ends or, from Weber's perspective, the disciplined performance of participants. As Gouldner notes, "the focus is, therefore, on the legally prescribed structures—i.e., the formally 'blue-printed' patterns—since these are more largely subject to deliberate inspection and rational manipulation" (1959: 404–5). Hence, all theorists utilizing this perspective focus primary attention on the normative structure of organizations: on the specificity of goals and the formalization of rules and roles. There are, however, important differences among the various schools in their approach to the normative structure.

Taylor was highly *pragmatic* in his approach, placing his faith in a method by which, beginning with individual jobs, superior work procedures could be developed and appropriate arrangements devised for articulating the myriad tasks to be performed. Work planning was distinguished from work performance, the former becoming the responsibility of management, especially engineering. Taylor was concerned primarily with devising methods for the planning of work and working arrangements. The administrative theory group exemplified by Fayol was less pragmatic and more *prescriptive* in its approach. Followers believed that general principles of management could be devised to guide managers as they designed their organizations, and so they busted them-

¹⁰Simon and the Carnegie School led the way in recognizing the relevance of the "new" cognitive psychology with its emphasis on heuristics and organizational routines as a means of responding to complexity and uncertainty. Rationality does not always entail thoughtful choice but often the following of rules. Later studies by cognitive psychologists pursued in detail the specific types of biases underlying judgment and decision making by individuals (see Bazerman, 2002; Kahneman, Slovic, and Tversky, 1982; Nisbett and Ross, 1980). Organizational routines are, in part, designed to overcome such limitations, as evolutionary economics has emphasized (Nelson and Winter, 1982).

¹¹A good overview of Simon's contributions to the analysis of decision making in organizations is provided by Taylor (1965). Useful applications and extensions of Simon's framework have been carried out by Allison (1971) and Steinbruner (1974).

selves constructing lists of "do's and don't's" as guides to managerial decision making. Weber was less concerned with discovering ways—whether pragmatic or prescriptive—for improving organizations than with attempting to develop a parsimonious *descriptive* portrait of the characteristics of the newly emerging bureaucratic structures. Like Weber, Simon was also descriptive in his approach, examining the effect of structural features on individual decision makers within the organization. Simon's conception, in particular, enables us to understand better how thousands and even hundreds of thousands of individual decisions and actions can be integrated in the service of complex goals. Such integrated, purposeful collective behavior requires the support of an organizational framework.

The four theorists also differ in the level of analysis at which they work. Taylor and Simon operate primarily at the social psychological level, focusing on individual participants as they perform tasks or make decisions; they treat structural features as contexts affecting these behaviors. By contrast, Fayol and Weber work at the structural level, attempting to conceptualize and analyze the characteristics of organizational forms.

James D. Thompson provides a simple summary of the general argument underlying the rational system perspective: "structure is a fundamental vehicle by which organizations achieve bounded rationality" (1967: 54). The specification of positions, role requirements, procedural rules and regulations, value and factual inputs that guide decision making—all function to canalize behavior in the service of predetermined goals. Individuals can behave rationally because their alternatives are limited and their choices circumscribed.

In a larger sense, however, rationality resides in the structure itself, not in the individual participants—in rules that assure participants will behave in ways calculated to achieve desired objectives, in cognitive decision-premises that guide individual decision making, in control arrangements that evaluate performance and detect deviance, in reward systems that motivate participants to carry out prescribed tasks, and in the set of criteria by which participants are selected, replaced, and promoted. As Taylor (1947: 7) concluded:

no great man can... hope to compete with a number of ordinary men who have been properly organized so as to efficiently cooperate. In the past the man has been first, in the future the system must be first.

Because of its emphasis on the characteristics of structure rather than the characteristics of participants, Bennis has dubbed the rational system perspective as depicting "organizations without people" (1959: 263).¹²

Let us not forget, however, that the conception of rationality employed by this perspective is limited. At the top of the organization, the value premises that

govern the entire structure of decision making are excluded from rational assessment: as long as they are specific enough to provide clear criteria for choice, these premises can support a "rational" structure no matter how monstrous or perverted their content. And, at the bottom of the organization, "rational" behavior often involves turning off one's mind and one's critical intellectual judgment and blindly conforming to the performance program specified by the job description.

We have also noted the great emphasis the rational system perspective places on control—the determination of the behavior of one subset of participants by another, by either unobtrusive or more obvious measures. Most rational system theorists justify these arrangements as serving rationality: control is the means of channeling and coordinating behavior to achieve specified goals. Few recognize the possibility that interpersonal control may be an end in itself—that one function of elaborate hierarchies, centrally determined design premises, and an extensive division of labor is to allow (and justify) arrangements in which some participants control others. The critical or Marxist perspective calling attention to these possibilities is examined in Chapters 3 and 7.

With the important exception of Weber, early rational system theorists did not take much notice of the effect of the larger social, cultural, and technological contexts on organization structure or performance. Attention was concentrated on the internal features of organizations.

By concentrating on the normative structure, these rational system analysts accorded scant attention to the behavioral structure of organizations. We learn much from them about plans and programs and premises, about roles and rules and regulations, but little about the actual behavior of organizational participants. Normative structure is celebrated; behavioral structure is ignored.

This chapter has identified the primary features and charted the early development of the rational system perspective from the early decades of the twentieth century up to roughly the early 1960s. This is, however, by no means, the end of the story. We consider more recent developments (beginning in Chapter 5) after reviewing the history of two related, competing perspectives. The natural system perspective, the second perspective to be considered, developed in response to the perceived inadequacies and limitations of the rational system perspective.

¹²Consistent with this conclusion, Boguslaw has observed out that whereas the classical utopians strove to achieve their end of the perfect social system by "populating their social systems with perfect human beings," the "new utopians"—systems engineers and control-systems experts—have become impatient with human imperfections, so that "the theoretical and practical solutions they seek call increasingly for decreases in the number and in the scope of responsibility of human beings within the operating structures of their new machines systems.... the new utopians are concerned with nonpeople and with people-substitutes" (1965: 2).