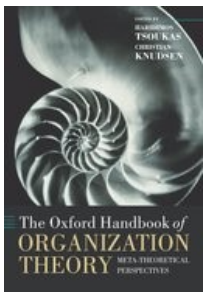

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CHAPTER

5 The Origins of Organization Theory

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Abstract

This article argues that contemporary organization theory owes its existence to social and technological changes that occurred during the last half of the nineteenth century and the first half of the twentieth century. These changes created both a basis for theorizing and an audience for theories about organizations. They stimulated an explosion in the numbers of large, formalized organizations, they made organizations relevant to many more people, and they made many more people interested in and capable of understanding theoretical propositions. This article follows a loosely chronological itinerary. It begins by taking note that theoretical writing about management began more than 4,000 years ago, and that some organizations had the essential properties of bureaucracy more than 3,000 years ago. It also reviews the developments that made organization theory possible and interesting.

Keywords: organization theory, technological changes, formalized organizations, management, bureaucracy

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ACCORDING to *Webster's Third International Dictionary*, theory is 'a coherent group of general propositions used as principles of explanation'. Organization theory is a collection of general propositions about organizations. Although people have been creating organizations for many thousands, perhaps tens of thousands of years, generalizations about organizations—contributions to organization theory—are almost entirely products of the last half of the twentieth century. People proposed very few generalizations about organizations before 1850, when a trickle of such propositions began. Propositions about organizations remained infrequent until the late 1940s, and they did not become prevalent until the 1960s.

The history of organization theory contrasts with the history of managerial thought. When people began to compose texts about organized activities, between 2,000 and 3,000 years before the Christian era (BCE), they focused on managerial practices rather than on organizations as such. Several writers proposed general principles for managerial practice before 1000 BCE, SO one can say that theories about managing have

existed for at least 3,000 years. These writings often said nothing about the organizational contexts in which managing was to occur. When the writers did make statements about organizations, they did not generalize. They wrote about specific organizations.

p. 144 This chapter argues that contemporary organization theory owes its existence to social and technological changes that occurred during the last half of the nineteenth century and first half of the twentieth century. These changes created both a basis for theorizing and an audience for theories about organizations. They stimulated an explosion in the numbers of large, formalized organizations, they made organizations relevant to many more people, and they made many more people interested in and capable of understanding theoretical propositions. This chapter reviews the developments that made organization theory possible and interesting.

The idea may have originated with Gulick's (1937) phrase 'the theory of organization', but it appears to have been Simon (1950, 1952–3, 1952) who most actively promoted the actual phrase 'organization theory'. Simon (1952) envisaged 'organization theory' as a broad category that included scientific management, industrial engineering, industrial psychology, the psychology of small groups, human-resources management, and strategy. He said his ideas reflected his participation in two conferences, and the programs of these conferences show that organization theory had a very broad meaning in the early 1950s. A conference at the Rand Corporation in August 1951 brought together social psychologists who discussed interactions among small groups, roboticists who discussed automata, and economists who discussed mathematical models of choice and information (Flood 1951). The second conference, at Princeton University in June 1952, assembled more than thirty scholars from a dozen universities to discuss the 'Theory of Organization'. The presentations at this conference focused mainly on intraorganizational behaviors: morale, leadership, the effects of organizations on their members, decision-making.

Despite the broad concepts of organization theory during the 1950s, intraorganizational topics are generally not included in the present-day meaning of 'organization theory'. In 1950, Princeton University received a grant to strengthen its social sciences, and it used this grant for an 'Organizational Behavior Project'. The Princeton scholars chose the topic 'organizational behavior' because it would embrace very diverse studies and encourage interdisciplinary research (Princeton University 1950–4). By 1960, however, many academics were making a distinction between 'organization theory' and 'organizational behavior', and the latter term had come to denote intraorganizational activities that focus on individual workers and small groups (Argyris 1957, 1960). A few years later, strategic management emerged as another partly distinct domain. Although the dividing lines remain very fuzzy and they may actually interfere with understanding, there now exists general agreement among academics that 'organization theory' somehow differs from both 'organizational behavior' and from 'strategic management'. This chapter assumes that 'organization theory' has this restricted contemporary domain, which involves looking at (a) single organizations as integrated systems, (b) many organizations that resemble each other, or (c) interactions among groups of
p. 145 organizations. The chapter explicitly excludes intraorganizational issues such as ↳ work design, industrial psychology, compensation, human relations, leadership, decision-making by individuals, and strategizing. In doing so, the chapter imposes esoteric, academic distinctions that appeared after 1960 on real-world events occurring long ago.

The chapter follows a loosely chronological itinerary. It begins by taking note that theoretical writing about management began more than 4,000 years ago, and that some organizations had the essential properties of bureaucracy more than 3,000 years ago. Next, the chapter surveys the educational, occupational, and technological changes that laid foundations for a new, organizational perspective. These changes escalated gradually through the sixteenth to nineteenth centuries, and then accelerated rapidly after 1850. Ensuing sections of the chapter examine changes in how people thought about organizations. The term 'organization' evolved from a Roman medical term into a perceived property of societies, and then came to denote both a property of diverse social systems and medium-sized social systems that possess some

degree of ‘organization’. Organizational forms such as company and corporation emerged and gained status, not as mere labels for their collective members, but as legal persons distinct from their members.

Although the term ‘organization’ arose from a philosophical tradition that saw social systems as history-dependent organisms, the earliest contributions to organization theory portrayed organizations as machine-like systems and they said little about how organizations might reflect history or temporary environmental conditions. Some of these early contributions protested against bureaucracies’ deficiencies or against threats that bureaucracies posed; others hailed organizations’ virtues or opportunities that organizations offered; the latter had a prescriptive tone. These themes began to merge during the late 1940s. Also around that time, writings about organizations started to acquire a character that its proponents described as more ‘scientific’.

The chapter ends sometime around 1960, as other chapters in this book discuss the subsequent events in detail. At that time, many studies were appearing and organization theory was acquiring a different kind of existence as an autonomous academic domain. Organization theory had arrived, but it now had to contend with pressures to fragment and to become self-absorbed and irrelevant to its environment.

As with any historical study, this one has biases created by the availability of records, my limitations, and my choices about what to report. History has often been a harsh editor of itself, with the result that surviving documents represent only a small fraction of those that once existed, and people chose this surviving fraction to support political or religious goals. Where no documents survive, understanding derives from later interpretations that incorporate the cultural and personal biases of the interpreters. As a resident of the United States, I have had much better access to documents in the English language, and
p. 146 although colleagues in other nations gave valuable assistance, this chapter's cultural and ↳ linguistic biases are still obvious.[1] The chapter expresses a cognitive and social-constructionist view of science; it emphasizes people's perceptions and their choices of perceptual frameworks. The resulting description of the origins of organization theory is rather phenomenological and atheoretic. It does not rest on a theoretical framework, and it does not purport to describe the development of social theories other than organization theory.

5.1 Premodern Writings About Management

5.1.1 In the Beginning, there was the Boss

The most conspicuous property of the oldest writings is their emphasis on superior-subordinate relations (Rindova and Starbuck 1997*a*). Probably the oldest surviving advice about managerial practices, a Mesopotamian version of the ark and flood, explains why leaders have to deceive their followers and how they can do so. The ark-builder asks one of his gods how to persuade other people to help him construct the ark: they will not help him if he discloses that the ark is intended to save him while a great flood drowns everyone else, including those who helped him build the ark. His god advises the ark-builder how he can tell the literal truth but do so in a way that deceives the workers.

Ancient texts from China, Egypt, Greece, India, and Mesopotamia describe uncomfortable and wary relations between leaders and followers, relations filled with ambivalence and fear. Superiors distrusted their subordinates, and subordinates distrusted their superiors, yet each had to depend on the other. People were concerned about (a) whether leaders and followers did or should trust each other and speak forthrightly to each other, (b) how leaders did or could manipulate followers and followers could control leaders, (c) how much followers did or should respect leaders and leaders respect followers, (d) whether status differences were justified, and (e) when leaders could be trusted to act appropriately. All strategies for

controlling subordinates entail advantages and disadvantages, as do all strategies for acting as a subordinate. Ancient people saw these trade-offs and recognized their complexity.

p. 147 Some writers sought to render superiors and subordinates more compatible. They urged superiors to restrain their exercise of power, to focus on behaving properly themselves, to be just and considerate, and to cultivate support of the populace over the long run. They urged subordinates to accept subordination, to demonstrate respect, to act honestly and forthrightly, and to pursue their superiors' best interests rather than their own. Other writers advised superiors to be suspicious of their subordinates, to deal harshly with dissenters and rebels, to pit subordinates against one another, and to manipulate subordinates by means of rewards and punishments. Control of armed force permitted superiors to seize property, to alter people's statuses, and to inflict death, so their subjects had reason to avoid actions that might arouse superiors' displeasure. Because many superiors had power of life or death over their subordinates and corporal punishment was prevalent, subordinates took pains to appear obedient and they stood ready to perform very diverse services if their superiors asked them to do so.

Superior-subordinate relations did elicit theorizing. One very old Chinese text, 'The Great Plan', spells out precepts about leadership that resemble some contingency theories of the late twentieth century (Rindova and Starbuck 1997*b*). This document and others not only stated prescriptions about how superiors and subordinates should behave but also articulated philosophies that explicitly related superior-subordinate relations to the structures of societies more generally. However, theories about organizations, if they existed, have not survived. In fact, the few documents that do survive from before 2000 BCE do not even discuss organizations as such. Organizations did exist, of course. There were armies, businesses, construction projects, and royal households. But, it appears that people did not regard themselves as working for or in organizations. They perceived themselves primarily as subordinates of specific individuals —such as kings, ministers, or owners of businesses. Their exact job assignments were secondary because their first responsibility was to do whatever their superiors asked of them.

5.1.2 Then Came Bureaucracy

The surviving documents indicate that some organizations became clearly bureaucratic during the second millennium BCE. Evidence from before 2000 BCE shows that organizations kept written records and had well-defined hierarchies of authority and rules about the rights and duties associated with positions, but not that they had other properties of bureaucracy. By 1100–1200 BCE, however, documents from China and Egypt and archeological remains from Mycenae testify that some organizations had also acquired division
p. 148 of labor based on functional ↳ specialization, work procedures, impersonal relations among people performing roles, and promotion and employment based on technical competence. Thus, these organizations exhibited the key properties of bureaucracy (Hall 1963).

Probably the most complete and interesting example of ancient bureaucratic practices is 'The Officials of Chou', which was written around 1100 BCE (Rindova and Starbuck 1997*b*). This document describes an elaborate organizational structure for the 'royal domain', which was a combination of the government and the king's household staff. This document gives a long, exhaustive, and detailed list of job descriptions for the many officials in the king's service, ranging from the prime minister to household servants (Biot 1851; Gingell 1852). However, 'The Officials of Chou' does not generalize about organizations. It describes only one specific organization, and when it states principles, it does not indicate that they also apply to other organizations. Likewise, after several years of searching documents from other regions, I have found only documents that focus on specific organizations, none that state generalizations about organizations. This dearth contrasts strikingly with the multitude of generalizations about managing that various people generated over four millennia.

This bifurcated pattern persisted over the next 3,000 years. Ideas about how to manage evolved and many authors proposed generalizations about managing. These generalizations were relevant to organizations in that they focused on activities that managers or organizations performed—on rule, military strategy, military logistics, motivation, compensation, role performance, money making, occupational and task specialization, and the ever-present issues posed by superior-subordinate relations. The generalizations dealt with how to organize or how to make organized activities effective, yet they did not speak to the properties of organizations as distinctive, integrated social systems—different from small, informal groups and different from very large societies. Evidently, people saw the results of organized activities as being products of actions taken by individuals, so they formulated prescriptions about actions individuals should take.

Large, formalized organizations existed, but they were rare. Many nations had well-organized governments. The Chinese and the Romans, for example, operated imperial governments that spanned several thousand miles and hundreds of administrative subunits. Hundreds of cities had large civic governments. On various occasions, people formed large armies that carried out complex missions over long periods, Alexander the Great and Genghis Khan being two examples. Some organized activities involved hundreds or thousands of workers—for instance, the Chinese Wall, the Egyptian pyramids and temples, the vast network of Roman roads, mines in many locations throughout history, the English and Dutch East India Companies, and the Hudson's Bay Company. Some organizations had very long lives. The Roman Catholic Church has been operating for two millennia. Stora Enso Oyj, a mining company founded in
p. 149 1288, continues ↳ in business today as one of the world's largest paper and timber companies. Striking as these examples were, they may have been too idiosyncratic and too extraordinary to inspire generalizations. I have been able to find only a few authors who proposed generalizations about organizations as distinctive social systems before the late nineteenth century.

One organizationally relevant theme that did elicit theoretical generalizations was division of labor, specialization, and mass production. People have understood the value of division of labor, specialization, and mass production for many thousands of years. People have had specialized occupations for as long as written records exist, and the bureaucratization that occurred in the second millennium BCE depended on specialization and division of labor. Archeological remains testify to the use of mass production techniques for glass-blowing and pottery-making as early as 500 BCE. Around 400 BCE, Plato remarked that specialization can increase productivity. Around 300 BCE, the Chinese philosopher Mencius discussed division of labor. Greek and Roman soldiers received training to standardize and coordinate their fighting techniques. In the early 1400s, the Arsenal of Venice was using an assembly line with about 2,000 workers to equip ships for fighting, and to make this process effective, the arsenal used standardized armaments and standardized components for the ships (George 1968; Lane 1934). Nevertheless, theorizing on these topics remained very sparse until European countries began to industrialize. Adam Smith (1776) put a spotlight on the economic benefits of specialization, division of labor, and mass production. Melchiorre Gioia (1815) and Charles Babbage (1832) sought to articulate principles for making mass production effective. Then these topics became the foci of the Scientific Management movement in the late nineteenth century (Merkle 1980).

Two men collaborated inadvertently in the seventeenth and eighteenth centuries to contribute a pair of insights to modern organization theory. In 1665 King Louis XIV appointed Jean-Bapiste Colbert his Comptroller General of Finance. At that time, the French economy was in turmoil. Colbert prosecuted corrupt officials and reorganized commerce and industry according to the economic principles known as mercantilism. To assure the populace that the government was going to act fairly, he demanded that officials abide by rules and apply them uniformly to everyone (Wolin 1960: 271). About eighty years later, in 1751, lean-Claude Marie Vincent de Gournay became France's Administrator of Commerce. An outraged Gournay railed against the numerous governmental regulations that he judged to be suppressing business

activity. To symbolize a government run by insensitive rule-makers and rule-enforcers who did not understand or care about the consequences of their actions, he coined the sarcastic term 'bureau-cratie' — government by desks.

Another forerunner of modern organization theorists was Andrew Ure, a professor of chemistry. An enthusiastic proponent of 'the factory system', Ure (1835) took a step beyond Adam Smith. Whereas Smith's
p. 150 pin factory was solely an example ↳ of division of labor, Ure pointed out that a factory poses organizational challenges. He asserted that every factory incorporates 'three principles of action, or three organic systems': (a) a 'mechanical' system that integrates production processes, (b) a 'moral' system that motivates and satisfies the needs of workers, and (c) a 'commercial' system that seeks to sustain the firm through financial management and marketing. Harmonizing these three systems, said Ure, was the responsibility of managers.

5.2 Organizations Become Topics of Discussion

5.2.1 Education, Specialization, and Technology Create the Concept of an Organization

Theories about organizations began to attract much more attention after 1850, as several long-term trends accelerated abruptly, making the concept of 'organizations' relevant to many people and preparing them to appreciate generalizations about organizations.

The societal changes that have greatly affected organizations and organization theory seem to have occurred mainly in education, occupational and task specialization, and technologies (George 1968; Shafritz and Ott 1996; Wren 1994). The people of 3,000 years ago had very well thought-out ideas about hierarchical control, superior-subordinate relations, motivational techniques, and compensation. However, they provided only rather basic education, and that for only small fractions of the populace; they generally drew fuzzy distinctions among occupations; they made little use of mass production; and they lacked access to technologies such as electricity, business machines, telecommunications, and flight that have had pervasive effects on procedures, strategies, and logistics.

5.2.2 Education Makes it Possible for Large Organizations to Proliferate and to Work Effectively

Over the centuries, education gradually grew more elaborate, especially after the invention of printing
p. 151 reduced the cost and increased the availability of study ↳ materials. However, education did not become widely available until the nineteenth century. Prussia led the movement toward universal education: in 1810, it began to require every child to receive three years of education. By 1850, well over 90 percent of the Prussian residents had become literate, and in 1868, Prussia began to require that every child receive eight years of education. Other countries followed Prussia's example. Sweden made education compulsory in 1842, Australia and New Zealand during the 1870s, Switzerland in 1874, Britain in 1876, the Netherlands in 1878, France in 1882, Serbia in 1888, and Ireland in 1892. The American states took almost seventy years to introduce compulsory schooling, starting with Massachusetts in 1852 and ending with Mississippi in 1918. For reasons political or religious, universal education came much later or not at all in Austria, Belgium, Italy, Portugal, Russia, and Spain (Bowen 1981).

Three factors drove the expansion of education in the nineteenth century. First, the Enlightenment period created an enthusiasm for rationality and a belief in the perfectibility of mankind. For example, in 1812,

James Mill published a pamphlet titled ‘Schools for All, in Preference to Schools for Churchmen Only’. Second, during the middle of the nineteenth century, while industrialization was creating employment for women and older children, many nations and states placed restrictions of the use of child labor. For example, Britain's Factory Act of 1833 forbade the employment of children less than 9 years of age. They shortly thereafter discovered that they needed to remove the young children from the streets. Third, industrialization created white-collar jobs that demanded literate workers. White-collar jobs quadrupled in England during the 1860s and 1870s.

As opportunities for white-collar employment multiplied during the last half of the nineteenth century, the graduates of elementary schools stayed in school to study accountancy and law. In America, the Land Grant Act following the Civil War encouraged the founding of many universities that embraced practical subject matter such as agriculture, engineering, and commerce. Merkle (1980) inferred that the Scientific Management movement contributed significantly to the expansion of managerial activity after 1880.

Then at the turn of the century, business-related studies acquired much higher status as curricula in elite universities. The University of Pennsylvania began teaching accounting and business law in 1881. Several prestigious universities created business schools around 1900. Harvard University launched a business school at the graduate level in 1908. These programs did not require that students take courses about management, but such courses were popular electives (Chandler 1977).

Education continued to spread and to grow more elaborate through the twentieth century. In the United States, in 1900, 24 percent of the population had less than five years of schooling. This percentage dropped to 11 percent in 1950, and to 1.6 percent in 1998. Similarly, in 1900, only 14 percent of adults had completed
p. 152 twelve ↳ years of schooling. By 1950, 33 percent of adults had completed twelve years of schooling, and by 1998, 83 percent.

Education disseminates literacy and arithmetic skills widely. Literacy and arithmetic skills have long been associated with organizations because they constitute foundations for consistent procedures, public accountability, coordination through written communication, and the enforcement of contracts.[2] The writing process shapes rationality by forcing authors to identify specific foci of attention and to arrange these foci in sequences. Thus, writing teaches people how to decompose complex tasks into sequences of elementary components, and this skill is a step toward dividing collective labor into sequential steps (Kallinikos 1996). Although written texts are distinctly artificial constructions, they are constructions that facilitate organizing (Ong 1982). Likewise, arithmetic facilitates the perception of individuals as substitutable units, the ordering and aggregation of divided labor, and commercial transactions (Hoskin and Macve 1986). As they grew larger and more systematic, organizations developed more complex and nuanced numerical methods (Edwards and Newell 1991).

Formal, public education also tends to emphasize generalizations because teachers try to make lessons meaningful to almost all students. Education emphasizes abstraction because lessons typically use in-principle discussions in classrooms rather than on-the-job experience. And such teaching also asserts the usefulness of abstract generalizations and gives students practice in applying generalizations to concrete instances. Thus, formal, public education creates a foundation for discussing abstract concepts such as ‘an organization’, ‘bureaucracy’, or ‘role’ and for seeing such concepts as useful.

Dreeben (1968) argued persuasively that one major function of schools is to transform people from junior and dependent members of small families into autonomous participants in multiple large organizations and social institutions. Schools teach ‘principles of conduct’ that include the proper behaviors of organizational membership—distinctions between roles and role incumbents, respect for bureaucratic authority, respect for standardized procedures, and accountability for task performance. In a similar vein, Foucault (1975) portrayed schools as systems for evaluating people and placing them into homogeneous categories, and in

the process, teaching the use of numerical performance measures. However, Dreeben's and Foucault's observations may not describe all cultures. For example, the expatriate Chinese have built their business firms around families and their business relationships have emphasized personal networks (Chan 1998).

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5.2.3 Growing Populations and New Technologies Make Large Organizations Efficient and Increase the Benefits of White-Collar Work

Occupational and task specialization developed gradually until the last half of the nineteenth century. Very likely, the slowness of this development reflected the small scale of non-agricultural production. Although people have understood the advantages of mass production for thousands of years, small populations and slow, difficult transportation had kept markets small and had restricted the potential returns to scale.

World population grew slowly until approximately 1600, and then the rate of population increase began to rise. By the late seventeenth century, the world population was increasing by roughly twelve times its average rate during the previous 2,000 years, and it continued to increase at this rate until the twentieth century, although the populations of Europe and the Americas grew more rapidly than the rest of the world during the nineteenth century. Population growth accelerated even further in the twentieth century. By 1950, the world population was increasing more than twice as rapidly as it had during the nineteenth century and almost four times as rapidly as it had during the eighteenth century. As a result, the world population grew 60 percent between 1750 and 1850, and more than 100 percent between 1850 and 1950. By 1987 the earth held ten times as many people as it had in 1650 (Cameron 1993; Reinhard, Armengaud, and Dupaquier 1968; United Nations 1998; Wrigley 1969).

Population increases both resulted from and stimulated technological changes. Better sanitation, better diets, and better housing reduced infant mortality and lengthened lifespans. Other technological changes lowered the costs and risks of transport, accelerated the speed of transport, and extended the distances over which trading occurred. In 1754 the 200-mile trip across England took four days, largely because the roads were terrible; and robbers often preyed on persons who attempted such a journey (Boulton 1931). The eighteenth century brought improved roads, more bridges, and a few canals, but such heavy construction remained difficult and infrequent until steam engines became available. Similarly, although continuous improvements in sailing ships encouraged Europeans to explore the world and to build empires, truly dramatic changes did not occur until boats and ships acquired steam power. Inventors began to experiment with steam power in the late 1700s; a few steam-powered boats came into use during the early 1800s; and steam power was coming into wide use by the mid-1800s. However, steam power was dangerous. Not until the mid-1880s did people understand why steam engines exploded, and explosions continued to be frequent
p. 154 into the twentieth century (Petroski 1996; Ward 1989). When it did become reliable, steam power made ↳ many new technologies possible: large ocean-going ships, long railway lines, large bridges, tunnels, paved roads, and massive earth moving. During the early years of the twentieth century, internal combustion engines added to the available options and made automobiles, trucks, and aircraft practical. Manufacturers could obtain raw materials from afar and send their products long distances. Firms could manage plants that were far apart. Chandler (1980) argued that the especially rapid growth of American markets caused the United States to become a first-mover toward managerial capitalism.

Numerous large construction projects such as canals and railroads required numerous large organizations. As large markets materialized, the returns available from standardized, high-speed production led to the creation of thousands of large factories. As these new organizations imitated each other, they created a substantial population of similar social systems, and these similarities stimulated generalizations. It became useful for observers to think about general principles for categories of organizations instead of focusing on the idiosyncrasies of specific organizations. The new prevalence of large organizations also made people more aware of the distinctive problems and opportunities that they pose. Although such

problems and opportunities had been occurring since antiquity, they had been unusual and easily ignored; now they became prevalent and very evident. Managers, who had earlier received low pay and disrespect, now gained value as problem solvers and opportunity pursuers (Pollard 1965). Large organizations created markets for consistent procedures and business machines to automate them. Business machines in turn reinforced the usefulness of consistent procedures (Elbourne 1934).

Although manufacturing has never dominated employment, the advent of factories had dramatic social effects that framed the birth of organization theory. Specialization and division of labor made work more efficient and less demanding physically but less satisfying. Women and children became more employable. Compliance received larger rewards, and ability received smaller ones. Social and economic differences between skilled and unskilled workers decreased, mainly by the devaluing of skill. Skilled workers began to form trade unions.

Frederick W. Taylor demonstrated how business could extract monetary value from white-collar activities —industrial engineering—that emphasized measurement and calculation and that possessed the avant-garde and respectable aura of 'science'. Greatly increased productivity made it possible for owners to reap large profits, and a lack of government regulation allowed predatory business behavior, with one result being creation of a class of very wealthy capitalists (Veblen 1904). Strife between business owners and employees gave impetus to the Scientific Management movement, which claimed to ameliorate conflict by increasing productivity and allowing higher wages (Merkle 1980; Shenhav 1995).

Strife between business owners and employees also spawned much controversy. Karl Marx (1867) railed against working conditions in factories, arguing that division of labor created unsatisfying jobs and allowed
p. 155 capitalists to dominate ↳ and take advantage of workers. Business organizations thus served as battlegrounds for conflict between working classes and capitalist ones. Marx also criticized the idea that managerial activity deserved special status; he opined that anyone could perform administrative tasks if these tasks were divided into sufficiently elementary components. He did not discuss who would decide what administrative tasks were needed, who would assign administrative tasks, or who would revise these assignments when circumstances changed. Marx's close colleague, Frederick Engels (1872) remarked, 'Everywhere combined action, the complication of processes dependent upon each other, displaces independent action by individuals. But whoever mentions combined action speaks of organization; now, is it possible to have organization without authority?' He responded to this rhetorical question by saying, 'The automatic machinery of the big factory is much more despotic than the small capitalists who employ workers ever have been.... If man, by dint of his knowledge and inventive genius, has subdued the forces of nature, the latter avenge themselves upon him by subjecting him, in so far as he employs them, to a veritable despotism independent of all social organization.' Presumably, Engels never met the clerk at the Bank of England who had to sign his seven-letter name on 5,300 new bank notes during an eleven-hour work shift (Babbage 1832).

Throughout the twentieth century, more affluent countries moved away from agriculture and manufacturing and toward service and information activities (Machlup 1962; Rubin and Huber 1986). Among white-collar workers, the fastest growing occupations were clerical, professional, and technical workers, and managers and administrators. In the United States, jobs in manufacturing fell from 27 percent in 1920 to 13 percent in 1999. Six factors contributed to this shift, which accelerated throughout the century. First, third-world and developing economies did more manufacturing while so-called advanced societies shifted toward services. Second, knowledge-intense and information-intense products and services grew, and production of traditional products made more intensive use of information and knowledge. Third, business invested in equipment to support information work. Fourth, within manufacturing, knowledge workers and information workers replaced manual production workers. Fifth, workers gained more education and information-processing skills. Sixth, new kinds of knowledge-intense and information-

intense organizations emerged that focused on production, processing, and distribution of information (Laudon and Starbuck 2001).

5.2.4 The Term 'Organization' Evolves and Splits into Several Concepts

Linguistic practices support the inference that people began to see organizations as a general category around the turn of the century. Usage of 'organization' to denote ↳ voluntary associations appears to have begun late in the nineteenth century, and by the 1920s, some people had started to use 'organization' as a general term denoting the general category of formally constituted medium-sized social systems.

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The word 'organization' derives from an ancient Indo-European root that also spawned the words 'organ' and 'work'. The Roman verb '*organizare*' meant initially 'to furnish with organs so as to create a complete human being', but later Romans gave it the broader meaning 'to endow with a coordinated structure'. *Organizare* migrated from Latin into Old French. In 1488, the French language included the word 'organization', which an ancient dictionary defined self-reflexively as 'the state of an organized body'. At that time, people probably reserved the term for biological bodies.

Although dictionaries published between 1750 and 1840 do not mention this usage explicitly, around 1800 some writers began to use 'organization' to describe a property of societies. Dohrn-van Rossum (1977) attributed this new usage to proponents of the French Revolution. For example, in 1789, in a pamphlet that played an important role in initiating the French Revolution, Emmanuel-Ioseph Sieves declared: 'it is necessary to prove further that the noble order does not enter at all into the social organization; that it may indeed be a burden upon the nation.' But six years earlier, in 1783, Justus Moser, a German historian, wrote of 'the better organization of our political body', so it may be that this usage was inspired by the Romantic Movement, which fed the French Revolution but also appeared in every European country, the United States, and Latin America.

During disorder following the French Revolution, Claude-Henri Saint-Simon (1976) wrote about the dangers posed by uncontrolled individualism. He argued that superior social organization makes humans superior to other animals and enables humans to exploit their environment and to live at a high standard of prosperity. But, organization and equality are mutually inconsistent, he said, because organization requires hierarchy, subordination, and authority. He advocated reorganization of society by scientists and industrialists, to create a scientifically optimal division of labor that would produce social harmony, productivity, efficiency, and technological innovation. John Stuart Mill also spoke of societal-level social organization in 1829, as did Auguste Comte in 1865. Influenced by Herbert Spencer's (1862, 1876) ideas about societal evolution, Alfred Marshall (1892) explained that 'industrial organization' entails both differentiation and integration of economic activities. A French progress report dated 1840 used the phrase 'organization of work' to indicate production methods.

Two significant changes began during the late nineteenth century. First, people recognized that social groups smaller than societies may exhibit organization. Second, people started to use 'organization' to denote not a property of a social group, but the social group itself. Initially, however, the label 'organization' may have been restricted to voluntary associations: The *Durham University Journal* of 7 November 1894 said 'We now have in the University... somewhere about fifty-three ↳ different "Organisations," athletic, intellectual, literary, social, and religious.' Likewise, the *Century Dictionary* of 1902 said that organization meant either the act of organizing or something that is organized 'specifically—an organized body of persons, as a literary society, club, corporation, etc' The *Catalogue Generale de la Librairie Française* had no entries for 'organization' in 1912, included voluntary scientific 'organizations' in 1915, and listed many kinds of 'organizations' in 1921. In 1920, the [American] National Association of Commercial Organization Secretaries published a text titled *Commercial Organizations* that is devoted to

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voluntary associations for business executives (Bruce 1920). Certainly, not many people were giving 'organization' the broad meaning it has in today's phrase 'organization theory'. The *Encyclopaedia Britannica* of 1910 used the term only in the context of biology; early organization theorists such as Michels (1911) and Weber (1910–14) did not speak of organizations but of bureaucracies; Fayol (1916) spoke of 'social bodies'; and Urwick (1933*a*) spoke of 'governmental, ecclesiastical, military and business *structures*' (emphasis added).

Some people were giving 'organization' its contemporary meaning as a broad category of formally constituted social groups by the 1920s. Gutjahr (1920) observed that the word 'organization' has both a concrete meaning and an abstract one, the concrete meaning being exemplified by a commercial enterprise, the State, the Church, or the Army. Gutjahr also pointed out that whereas the components of some organizations were almost entirely human, a commercial enterprise combines people with equipment. Similarly, Davis (1928), the *Pitman Dictionary of Industrial Administration* (Lee 1928), and Mooney and Reiley (1931) explained 'organization' could mean a business firm.

5.2.5 Companies and Corporations become Immortal Persons

In one of the most implausible social constructions of the nineteenth and twentieth centuries, business and voluntary organizations changed from temporary special-purpose coalitions of specific owners into immortal legal persons having rights independently from their owners, members, or other stakeholders.

In Europe up to the late nineteenth century, almost all business organizations were sole proprietorships or partnerships, and a business entity was regarded as indistinguishable from its owners: any owner could unilaterally dissolve a business or make agreements on behalf of their businesses, and owners were liable for all debts incurred by their businesses and for any legal violations committed by their businesses. Indeed, under Greco-Roman law, partners in bankrupt businesses could be imprisoned or sold into slavery, so partners needed to have very great confidence in each other (Baskin and Miranti 1997). Such ownership imposed growing risks as enterprises grew larger and extended their geographic ranges.

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Alternative forms of shared control emerged between the tenth and fifteenth centuries. First, to raise capital for expensive ventures, some partnerships sold transferable ownership shares. Small groups of senior partners controlled such partnerships. Second, Italian merchants invented a variety of ownership contracts for ventures encompassing a few voyages or short periods; the nouns 'company', 'college', and 'fraternity' derive from these arrangements. Later, the term 'company' denoted a partnership having a royal charter that granted it fixed-term monopoly rights for a specific form of manufacture or trade. Starting in the mid-1500s, some companies sold transferable ownership shares. These 'joint-stock companies' were usually ones that undertook expensive, risky ventures. Third, the label 'corporation', which had emerged originally to describe the Roman Catholic Church's claimed status as the embodiment of Jesus Christ, gradually spread to other collective bodies—monasteries, universities, craft guilds, municipalities, and the British Parliament. Corporations could own property and they had papal or royal charters that enabled them to persist indefinitely despite changes in the specific people who composed them. Thus, by the sixteenth century, companies were partnerships that engaged in manufacture or trade for fixed periods whereas corporations were collectivities that could legally exist indefinitely.

Improvements in sailing technology led European countries to expand their empires between the sixteenth and eighteen centuries, and joint-stock companies played important roles in these expansions (Arrighi, Barr, and Hisaeda 1999; Law 1986). By spreading risk across many people, joint-stock companies enabled the raising of large amounts of capital, and thus the constructing of multi-ship convoys and trading forts in remote lands. However, joint-stock companies remained quite unusual because they required royal

charters. In this period, corporations, which also required royal charters, were often created to carry out public projects such as the construction and maintenance of roads.

By 1800, considerable variety had developed in forms of ownership, but proprietorships and partnerships vastly outnumbered joint-stock companies and corporations. The general perception seems to have been that joint-stock companies and corporations differed little from partnerships (Lamoreaux 2000). Legal decisions concerning joint-stock companies or corporations used plural pronouns and verbs just as did decisions concerning partnerships. Each company or corporation required a unique charter and, during the early part of the nineteenth century, these charters generally did not limit the liability of owners.

The nineteenth century brought many changes (Lamoreaux 2000). The American states competed with each other to attract businesses, and one medium for competition was legislation about business organization. More and more charters gave owners limited liability. The distinction disappeared between joint-stock companies and corporations. Legislatures stopped requiring each new enterprise to obtain a unique charter and, instead, they set up procedures by which people could create business corporations by filing standardized forms.

p. 159 Most corporations were small, but the construction of railroads spurred the creation of corporations so large that they could not have been partnerships. British legislation also changed, culminating in a major revision in 1856 that made it much easier to form joint-stock companies (Wilson 1995). The number of British stockbrokerages more than tripled between 1800 and 1870 (Killick and Thomas 1970).

Confusion continued well into the twentieth century regarding the differences between corporations and partnerships. A focal issue was whether corporations were aggregates of their owners or were distinct from their owners. For instance, Machen (1911) asserted that a house could not be 'merely the sum of the bricks that compose it' for one could 'change many of the bricks without changing the identity of the house'. Gierke (1868–1913) put forth the idea that each corporation possesses a distinctive personality, and this notion progressively won supporters in Germany, then in France and Italy, and around the turn of the century in Britain and the United States. Legal decisions about corporations began to use singular pronouns and verbs, unlike decisions concerning partnerships (Laski 1916). Gradually, there came growing agreement in Europe and North America that a corporation possessed 'personhood' and was distinct from its owners (Lamoreaux 2000; Mark 1987). Rathenau (1917) proposed that many corporations no longer had permanent owners: 'The claims to ownership are subdivided in such a fashion, and are so mobile, that the enterprise assumes an independent life, as if it belonged to no one; it takes an objective existence, such as in earlier days was embodied only in state and church, in a municipal corporation, in the life of a guild or a religious order.'

The logical next step occurred during the 1930s, when some observers remarked that managers of corporations often act in ways that are inconsistent with the interests of stockholders. Berle and Means (1932: 313) surmised, 'The rise of the modern corporation has brought a concentration of economic power which can compete on equal terms with the modern state.' They reported that some corporations had grown so large that by 1930 the 200 largest ones controlled half of all corporate assets and a quarter of American assets. At the same time, stock ownership had been greatly dispersed and nearly all stockholders held very small fractions of the stock, with the result that stockholders of about half of the largest corporations could not exert effective control. Thus, in many cases, it was no longer realistic to think of managers as agents who were running businesses in the interest of owners:

> On the one hand, the owners of passive property, by surrendering control and responsibility over the active property, have surrendered the right that the corporation should be operated in their sole interest.... At the same time, the controlling groups [managers], by means of the extension of

> corporate powers, have in their own interest broken the bars of tradition which require that the corporation be operated solely for the benefit of the owners of passive property. (1932: 311–12)

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5.3 Organization Theory Emerges

5.3.1 Organization Theory Takes Root in a Mechanistic Philosophical Tradition

Proposed generalizations about organizations began to appear shortly after 1850. At that time, scholars had recourse to two contradictory philosophical traditions regarding societies and their development (Mirowski 1994; Schumpeter 1912; Toulmin 1990). An older tradition characterized societies as history-dependent organisms, analogous to the bodies of animals. Social systems should not be regarded as mere aggregates of individuals for not only do individuals interact but societies contain many interacting subsystems. Occurrences blend concepts about what should happen with external factors such as accidents and temporary conditions, so explanations need to allow for the specifics of particular cases. Theories should describe the diversity of observed phenomena and fit them into evolutionary analytic frameworks. People are integrated creatures; human thinking occurs in human bodies; people have motives of which they are unconscious, and human actions are not always rational. Because people are not machines, it is both unrealistic and immoral to treat them as substitutable components in factories or bureaucracies.

A more 'modern' tradition that rose to prominence during the seventeenth century regarded societies as machine-like. This mechanistic tradition saw the natural universe as a system of clockwork that follows timeless and immutable laws and sought theories that describe these causal laws. Abstract generalizations are better than concrete descriptions because they focus on durable essentials. Although the animal nature of humans corrupts their behavior, people should isolate and suppress their animalistic urges and strive to act solely on the basis of rational thought, which gives human reason a machine-like quality. Factories and bureaucracies achieve high productivity and reliability by training people to behave uniformly and consistently and treating them as substitutable components. By using their rationality, people can create stable and effective social systems.

The mechanistic tradition gained popularity during the nineteenth century, which was a period of mechanical invention and of fascination with mechanical contrivances. Especially toward the end of the century, the proliferation of new machines and the successes of physical and chemical science sparked interest in theories that depicted people and social groups as mechanical systems. In the very first issue of the *American Journal of Psychology* in 1887, Charles S. Peirce addressed the then controversial topic of whether logical machines would be able to replicate human thought. Irving Fisher's doctoral dissertation of 1892 drew analogies between competitive economies and hydraulic systems.

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A persistent topic of debate through many centuries has been the degree to which humans could exercise choice or control events, and both of the philosophic traditions made ambiguous statements regarding this issue. Mechanistic views of societies said people have very limited freedom to do what they please, but they also said people do not value freedom of choice because they act rationally and they can predict the consequences of their actions. Organismic views said societies can accommodate peculiarities and temporary deviations, but they also said societies must satisfy requirements about completeness and harmony. As a result, both traditions struggled to reconcile contradictions between societies' predictability and their controllability, between the stability of social arrangements and humans' ability to engineer them. A mechanistic system is very predictable because human intervention cannot affect it much. If people could control social arrangements, they would be able to turn the causal processes into unpredicted directions. Perhaps this debate explains the slowness with which observers came to see organization members as decision-makers. Not until the late 1930s did anyone—Barnard (1937/1938), as it turned out—assert that

decision-making is an important activity within organizations; and decision-making remained a marginal theme in organization theory until the late 1950s.

A few thinkers explored the middle ground between these polar philosophical traditions. John Stuart Mill, for example, drew distinctions between the more permanent and the more volatile economic laws, and Karl Marx asserted that ‘natural laws’ are no more than descriptions of temporary social relations that happen to exist at a particular time. However, the two traditions are sufficiently dissimilar that it was and remains quite difficult to integrate them.

Wolin (1960) took it as significant that Simon (1952) used mechanical language to describe organizations; he interpreted this as a sign that Simon was attributing rationality to organizations. In this, Wolin may have been placing too much emphasis on Simon's personal input. Even the earliest generalizations about organizations tended to treat organizations as almost-mechanistic systems, and rational behavior has long been a component of the mechanistic philosophical tradition.

From the 1860s to the 1960s, two themes dominated organization-theoretic writings. One theme was ‘Bureaucracy has defects.’ The earliest organizational writings by sociologists and economists focused on governmental bureaucracies, and they paid much attention to how bureaucratic governments affect societies. They expressed particular concern about bureaucracies’ propensity to ignore their environments. The second theme was ‘How can organizations operate more effectively?’ The earliest organizational writings by consultants and former managers discussed factories and other businesses, and they concentrated on identifying structural properties that influence organizations’ productivity and responsiveness to top managers. The mechanistic orientations of the consultants and former managers are
p. 162 easier to understand because almost all these people ↳ expressed admiration for Scientific Management and mechanistic conceptions seemed to make it feasible to analyze organizations and to render them more efficient or effective. The mechanistic orientations of the early sociologists are more mysterious, since many of them had studied in academic traditions that viewed societies as history-dependent organisms.

Thus, organization theory's birth was motivated by both perceived threats and perceived opportunities. Those who wrote about bureaucracy generally saw it as a repulsive threat to something—good government, control by rulers, individual freedom. Those who wrote about organization design generally saw organizations as offering attractive opportunities for something—efficient production, control by owners, cooperative effort.

5.3.2 Theme 1: Bureaucracy has Defects, some of which Generalize to other Organizations

Given that Gournay defined bureaucracy as an undesirable form of government administration, it is not too surprising that ‘bureaucracy’ has generally had a bad connotation. Nearly everyone who has written about bureaucracy has complained about it; almost the only authors who found value in bureaucracy were German economists and sociologists writing between 1870 and 1915. It is also not too surprising that the authors who have pointed to bureaucracy's deficiencies have each defined it differently. Bureaucracy has tended to mean not a specific form of organization so much as some undesirable aspects of any organization.

In 1861 John Stuart Mill contrasted representative democracy with several governmental forms, including monarchical, aristocratic, and bureaucratic. He defined bureaucracy as government by trained officials, but he did not even mention bureaucracy in his chapter about the ‘executive functionaries’ in a representative democracy even though he discussed the education and selection of such personnel at length, so he evidently saw bureaucracy as a government without elected personnel. Mill asserted that bureaucracy exhibits higher political skill and ability than any other governmental form except representative democracy. Bureaucracy ‘accumulates experience, acquires well-tried and well-considered traditional

maxims, and makes provision for appropriate practical knowledge in those who have the actual conduct of affairs' (1861:122). But bureaucracies are burdened 'by the immutability of their maxims; and still more, by the universal law that whatever becomes a routine loses its vital principle, and... goes on revolving mechanically'. Bureaucracy's weakness arises from its internal consistency; 'conflicting influences are required to keep one another alive and efficient' (1861:123–4).

The economic historian Gustav Friedrich von Schmoller (1898) lauded the achievements of the Prussian
p. 163 government, which, he concluded, had been able to ↳ overcome feudal traditions and to bring about reforms because its administrators had stood above the selfish interests of social classes. He emphasized that in the Prussian state, government administrators were professionals with specialized training who were pursuing careers as civil servants, and they operated within a legal framework that defined their rights and duties. Such administration depends, he said, on the existence of a well-developed educational system. There was, however, risk that the professional administrators might act inconsistently with the will of the state's ruler and that they might form a new social class with its own selfish interests.

During the 1910s, the sociologists Robert Michels and Max Weber extrapolated the notion of bureaucracy from governmental units to other kinds of organizations. But, their bureaucracies were rather restricted organizations, being no more than administrative hierarchies that performed well-defined tasks.

In 1884 the Italian political scientist Gaetano Mosca published a book arguing that an effective organized political minority could dominate an unorganized majority. Michels took Mosca's idea an additional step (Albertoni 1987). Using arguments that reflect the German tradition of dialectic reasoning, Michels (1911/1999) pointed out that voluntary associations, such as political parties and labor unions, develop bureaucracies that become ends in themselves. To act rapidly and efficiently, bureaucracies create 'a certain administrative unity' and they tend not to listen to their constituents. Since bureaucracies' centralizing tendencies conflict with the democratic norms of voluntary associations, the associations have both centralizing and decentralizing tendencies. '[T]he various tendencies towards decentralization..., while they suffice to prevent the formation of a single gigantic oligarchy, result merely in the creation of a number of smaller oligarchies, each of which is no less powerful within its own sphere' (1911/1999: 202). On the one hand, 'Democracy is inconceivable without organization' (p. 61); and on the other hand, there are 'immanent oligarchical tendencies in every kind of human organization which strives for the attainment of definite ends' (p. 50).

Scholars have made divergent interpretations of Weber's writings, which use complex language that contains ambiguity and inconsistency. Weber (1910–14) attempted to understand social phenomena in terms of idealized groups of mutually reinforcing properties that he called 'ideal-types'. One of these ideal-types was bureaucracy. Thus, Weber saw bureaucracy as an idealization of a type of organization rather than as a description of actual organizations, yet he applied this label to a very wide range of contemporary and historic organizations that did not necessarily possess all properties of the ideal-type. Because he emphasized the technical virtues of bureaucracy and described its deficiencies as contingent possibilities, his characterizations resemble prescriptions for how to organize effectively. The examples that Weber cited included many ancient organizations—such as the Egyptian army, the late Roman government, the treasury of the Norman state—but he also argued that 'modern bureaucracy' was a new and pervasive organizational
p. 164 form that was ↳ especially well suited to meet the complex administrative challenges posed by a capitalist industrial society (Heydebrand 1994). According to Weber, bureaucratic administrative practices gained impetus from the spread of democracy, from demands for fast accurate business transactions, and from increases in public services such as police, roads, waterways, and railroads. He expressed a fear that the spread of bureaucratic practices would create an 'iron cage' of rational thought and impersonal relationships that would make human life less enjoyable.

The properties that Weber attributed to modern bureaucracy include: (a) division of labor into assigned areas of authority, (b) clear hierarchy of authority, (c) administrative actions based on formal rules rather than personal relationships, (d) written documents, (e) functional specialization, and (f) full-time jobs that convert administration into a vocation. He said the combination of a secure salary, career prospects, cohesion among colleagues, and vulnerability to public criticism compels bureaucrats to apply rules impersonally and mechanistically, but these properties also make bureaucracies resist change and make governmental bureaucracies resist control by parliaments or rulers. Weber stated:

> The decisive reason for the development of bureaucratic organization has always been its purely technical superiority over every other form. A fully developed bureaucratic apparatus compares to other forms as do mechanical to non-mechanical modes of production. Precision, speed, clarity, accessibility of files, continuity, discretion, unity, strict subordination, avoidance of friction and material and personal expenses—all these attain an optimal level under bureaucratic… forms of administration and by means of trained individual officials… (Heydebrand 1994: 77–8)

What made 'modern bureaucracy' distinctively modern, Weber said, was that functional specialization 'presumes a thorough training in an area of specialization' (1994: 61). As a qualitative statement, this rationale for modernity makes no sense, because clerical workers and administrators have been receiving training and serving apprenticeships more than 4,000 years. However, there is no question that after the mid-1800s, much higher percentages of the populace were literate, were learning law, accounting, and clerical skills, and were attending schools of business.

The economist Alfred Marshall (1919: 850) asserted that bureaucracy was more appropriate to Germany than to Britain: 'although the semi-military organization of Imperial Germany was well adapted for the methods of bureaucratic control, other methods are needed by a nation which governs its own Government.' Even though 'each of the numerous Government offices in Westminster is in some measure bureaucratic', these partial bureaucracies were rule-bound impediments to innovation. Thus, Marshall observed that the effectiveness of organizational forms relates to their societal contexts, and that different organizational forms produce different consequences, but he did not discuss these relationships.

By the 1930s and 1940s, complaints about governmental bureaucracies could be heard in France, Germany, the United Kingdom, and the United States. Mannheim (1935) protested that societies were falling
p. 165 increasingly under the monopolistic ↳ control of administrative bureaucracies staffed by isolated administrative castes. He observed 'universal alarm at the growth of bureaucracy' based on 'the old belief that institutions and organizations are perfectly rigid, and incapable of developing new attitudes of mind' (1940: 325). Mannheim expressed particularly distress over the 'cold impersonal atmosphere' in 'the new bureaucracy', yet he advocated a new form of 'objective justice' such that 'emotion becomes attached to the handling of the case and not to the individual who is helped' (1940: 322).

Warnotte (1937) also remarked on bureaucracy's dreadful reputation. He observed that French dictionaries assigned two meanings to the word 'bureaucracy', one being the spreading influence of government officials upon business firms, the other being abusive actions by administrators. 'Administration, in the minds of those who are governed, is something ugly, incomprehensible, mysterious, irritating, and incompetent. Bureaucracy owes the birth of this sentiment in the populace to its frequent and unexpected intrusions into the life of citizens, to its ambition to observe all rules, without daring to risk diverse experiences and impeding innovation with an excessive lethargy' (1937: 258). Warnotte blamed the abusive actions on adherence to rules, conformity to precedents, and officials' acclimatization to their jobs, 'la deformation professionelle du fonctionnaire'.

Merton and Selznick restated the foregoing ideas in more formal language. Merton (1940) articulated three processes that had been identified by Michels, Mannheim, and Warnotte. First, an emphasis on reliability

fosters adherence to rules. Rules become ends in themselves and lose their relationship to the purposes for which they originated. As a result, bureaucracies resist changes and have trouble adapting. Second, similarities among colleagues keep them from competing with each other and promote *esprit de corps*. As a result, the entrenched interests of bureaucrats take precedence over their concern for clients or their responsiveness to superiors. Third, depersonalized relationships with clients and general, abstract rules cause bureaucrats to ignore the peculiarities of individual cases. As a result, bureaucrats appear arrogant and haughty. Selznick (1943) contributed a formal restatement of Michels's ideas about how bureaucracies take actions that contradict their espoused norms. He emphasized the idea that organizations informally modify their procedures to obtain 'operationally relevant solutions' to problems that arise daily. The need for cooperative effort induces organizations to delegate functions to officials. Nominally, officials are supposed to be agents for someone else—members of voluntary associations, owners of firms, the citizenry—but the interests of officials do not always align with the interests of those they represent. The officials are able to deflect organizations' goals because they control bureaucracies and they have more expertise than do the people they represent.

Von Mises (1944:1) observed that nearly everyone interpreted the term 'bureaucracy' as a 'disparaging criticism'. 'Even in Prussia, the paragon of authoritarian government, nobody wanted to be called a
p. 166 bureaucrat.' He (1944: 2) offered his ↳ opinion that even though 'everyone seems to agree that bureaucracy is an evil,... nobody has ever tried to determine in unambiguous language what bureaucracy really means.' After much debate, he finally defined bureaucratic management as 'management in strict accordance with the law and the budget' (p. 43), and he said that people resort to bureaucratic management to handle 'affairs which cannot be checked by economic calculation' (p. 47). He devoted most of his book to bureaucratic management's undesirable effects, including complacency and regrettable psychological effects.

World War II produced expansions of central governments and so made more people aware of bureaucratic behaviors. Thus, the postwar period brought more commentaries about bureaucracy. However, bureaucracies were not the only organizations that elicited complaints. By the late 1950s, complaints about organizations had extended beyond governmental bureaucracies. One of the most widely read and influential documents of the 1950s was Whyte's (1956) best-selling and influential critique of American corporate society. Whyte asserted that America was in the grip of a troubling 'Social Ethic'. He said, 'Its major propositions are three: a belief in the group as the source of creativity; a belief in "belongingness" as the ultimate need of the individual; and a belief in the application of science to achieve the belongingness.' As a result, many employees, at all levels of management and in technical specialties, were allowing their employing organizations to dominate their lives and the lives of their families. Organizations were telling employees how to dress and to behave. They were cutting off employees' roots in communities by moving them and their families frequently. They were shaping employees' personalities.

In a book that influenced many academics, Argyris (1957) shifted the discussion from sociology to psychology when he spelled out some potential effects of organizations on employees' personalities. Young children, he said, are passive, dependent, subordinates who lack self-awareness and who have limited behavior repertoires, short-term interests, and short time horizons. Through their lifetimes, people ought to be maturing into active, independent adults who have self-awareness, diverse behavior repertoires, long-term interests, and long time horizons. But, organizations give workers minimal control over their activities, encourage the use of superficial abilities, and require workers to be passive, dependent, and subordinate and to have short time horizons. Thus, organizations impede people's development and foster unhealthy personalities. Argyris called for more academic research into 'organizational behavior' to counteract these unfortunate effects of organizations.

Thus, bureaucracy motivated organization theory with both propulsion and repulsion. Some writers sought to describe bureaucracy's attractive qualities; many writers sought to describe its deficiencies and harmful

effects. Since more admirers wrote earlier and more critics wrote later, the general trend was to formulate organization theory as the study of tribulations.

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5.3.3 Theme 2: How can Organizations Operate more Effectively?

Weber's research method was to think of examples a specific type of organization, the bureaucracy, and to try to infer what was similar or dissimilar about these examples. Other writers used much the same method during the 1920s and 1930s to look for properties common to organizations of all kinds. Like Michels and Weber, most of them took a limited view of organizations as being merely administrative hierarchies with well-defined tasks to perform, and they thought they were creating rigorous, scientific theories (e.g. Urwick 1933*b*). But unlike Michels and Weber, they used the plain language of managers, they rarely attempted to compare organizations from different eras, and they focused their thinking on how to make organizations more effective: How should organizations be organized? Their prescriptions resemble 'The Officials of Chou', but unlike the authors of 'The Officials of Chou', they sought to generalize across many organizations and they explicitly recognized that administrative hierarchies function as integrated systems.

Textbooks written during the very early years of the twentieth century talked about alternative ways to organize administrative hierarchies and to standardize procedures (Elbourne 1914; Kimball 1913), but they devoted little attention to organizations as integrated systems. These books often spoke of 'systems', but when they did so, they were talking about the need for organizations to have explicit procedures.[3] However, a gradual change took place, and documents written during the 1920s began to view organizations as integrated systems and to discuss the structures of these systems. In one of the earliest of these works, Gutjahr (1920) devoted a chapter to ways in which a commercial enterprise can or should adapt to its economic environment. He discussed product specialization, the failure of unsuccessful businesses, horizontal and vertical integration, alliances and joint ownership, choice of location, and advertising.

Child (1969) credited Frederick W. Taylor and Henri Fayol with rousing interest in the merits of different organizational structures (also see Urwick 1956). A highly influential and controversial author and speaker, Taylor focused his attention on work design and related topics that lie outside the domain of this chapter. But, he (1903) did experiment with 'functional management', in which each supervisor concentrated on a narrow range of 'functions' and each worker had no less than eight supervisors who attended to different aspects of the worker's job.

A retired business executive, Fayol became involved in the reorganization of government agencies, and as a result, he formulated prescriptions that he believed to be generally applicable in all kinds of organizations.

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According to Fayol (1923), ↳ the word 'administration' had meant only government officials in 1910 when people met for the First International Congress of Administrative Science. Fayol saw himself as broadening the meaning of 'administration' to encompass, 'not only the public service but enterprises of every size and description, of every form and purpose. All undertakings require planning, organization, command, coordination and control, and in order to function properly, all must observe the same general principles' (1937:101).[4]

Both Fayol and Taylor had enthusiastic adherents in France, and so Chevalier (1928) sought to reconcile the two viewpoints, arguing that they proposed complementary principles rather than contradictory ones. He also debated the generalizability of organizational prescriptions across cultures: he speculated about the implications of his stereotypes about the Americans, English, and Germans, and he proposed that the French would appreciate methods of rational organization that respect workers' individuality. French workers do not resist following orders, he said; they only resist following bad orders.

An early management text by Ralph C. Davis (1928) recognized that an organization includes workers as well as executives, and it took a rather broad view of organizational properties that should concern

managers. For example, Davis observed that assignments of responsibilities typically take account of managers' personal abilities, personalities, experience, family connections, ambitions, and intraorganizational politics. He also said organizations benefit from *esprit de corps*, and 'this, in turn, depends on the creation of an ideal for which the whole organization is striving' (1928: 43). He described five basic 'organization types', as well as various subtypes, but he restricted these to alternative hierarchical arrangements.

Dennison (1931) expressed skepticism about the general validity of 'principles of organization structure'. Tasks change. Some tasks impose restrictions on organizational forms whereas other tasks can be performed well by very diverse organizations. In addition, organizations tend to grow more rigid as they grow older and larger, with the result that they become insensitive to gradual changes. One implication is
p. 169 that organizations need to reorganize, to evolve continuously. ↳ A second implication is that organizations need to balance mobility with stability, flexibility with equilibrium.

The automobile executive James Mooney and Alan Reiley (1931) inquired what functions do organizations need to perform in order to operate effectively. They sought to identify the common properties of all kinds of organizations, the properties that make them distinctive social entities. They selected three key properties, which they called principles: coordination, hierarchy, and functional differentiation. Following Anderson's (1929) prescriptions for logic, they developed a systems theory of organization that assigned to each principle a causal process and an effect. In an effort to marshal empirical evidence that was unusually systematic for its time, they then discussed evidence about these principles in governments, the Roman Catholic Church, military organizations, and industrial firms.

Several other authors followed the lead of Fayol, Davis, and Mooney and Reiley in searching for general properties of organizations that could lead to prescriptions: Graicunas (1933), analyzed the combinatorial implications of different spans of control. Urwick (1933*a*, 1933*b*, 1934) contrasted the contributions of Fayol and Mooney and Reiley, and offered his thoughts on methods of coordination, spans of control, and especially relations between line and staff. Elbourne (1934) listed many principles that should guide organizations or managers; particularly interesting are his principles for treating organizational arrangements as experiments. Gaus (1936: 90) reviewed various organizational principles and concluded limply that organizing should be 'a relating of individuals so that their efforts may be more effective'. Gulick (1937) also offered prescriptions regarding spans of control, relations between line and staff, and methods of coordination, and analyzed the merits of alternative forms of decentralization (purpose, product, clientele, location).

Chester Barnard (1937/1938: p. ix), a retired executive, protested that

> the social scientists—from whatever side they approached—just reached the edge of organization as I experienced it, and retreated. Rarely did they seem to me to sense the processes of coordination and decision that underlie a large part at least of the phenomena they described. More important, there was lacking much recognition of formal organization as a most important characteristic of social life, and as being the principle structural aspect of society itself.

In particular, Barnard complained that theories rooted in observations about governmental and church organizations had overstated the importance of formal authority, and that theories rooted in economics had overstated the importance of 'intellectual' processes as distinguished from emotional and physiological ones. In comparison with prior authors, Barnard's analyses exhibit more complexity and much more awareness of psychological factors. He defined an organization as any consciously coordinated system of cooperative activities, and argued that every organization needs willing participants, purpose, communication, effectiveness, and efficiency. Large, complex organizations, he said, are composed of many
p. 170 ↳ small organizations involving from two to twenty persons, some of them constituted formally and others

informally. The component organizations must be small enough that people are able to communicate and lead effectively. Barnard proceeded to discuss (a) alternative bases for specialization, (b) the economy of inducements that organizations offer members and the contributions they receive from members, (c) the properties of authoritative communications, and (d) the properties of organizational decision-making. He ended his analysis by discussing various functions performed by executives, the key element being that executives do 'the specialized work of *maintaining* the organization in operation' (1937/1938: 215).

Barnard introduced the then novel ideas that decision-making is an important activity performed by executives and that organizations influence executives' decisions. Simon (1944, 1947), a professor with strong interest in the academic implications of actual administrative practices, spelled out some ways in which organizations affect decision-making. The inputs to decisions include authority, organizational loyalties, efficiency criteria, intraorganizational communications, and plans, and then after they are made, decisions become subject to review for their correctness. Both Barnard and Simon were characterizing organizations as settings for dynamic processes and they were asserting the relevance of social psychology for understanding these processes. Before 1950, Barnard and Simon were the only writers who paid much attention to decision-making or information-processing in organizations. Theories of leadership did not discuss decision-making skills or communication skills. Although economists portrayed firms as choosing prices or output quantities, they assumed that firms had perfect information and unlimited analytic abilities; some economists even argued that the decision-making and information-processing within firms could not matter because any firm that took suboptimal actions would go bankrupt. Changes began during the 1940s and 1950s, when some economists began to talk about possible limitations on economists' theories, and some social psychologists studied problem-solving by small groups, in which different group members played different roles. In addition, in the 1950s, a few psychologists began to use computer programs as models of human problem-solving (Laudon and Starbuck 2001; Salgado, Starbuck, and Mezias 2002).

Barnard and Simon described organizations as settings in which individuals make decisions; they did not describe organizations as decision-making systems. In fact, the ideas that organizations per se process information and make decisions did not appear until the late 1950s and early 1960s. A conceptual shift became visible in 1958 when Forrester and March and Simon described organizations as information processors. Then in 1963, Cyert and March portrayed organizations as systems that learn and they described some organizational decision processes in detail. The contributions by Forrester, March and Simon, and Cyert and March emphasized the importance of rules in organizational behavior: organizations are understandable and predictable because they behave consistently, because they act like machines.

p. 171 In contrast with the writings about bureaucracy, the prescriptive literature said little about organizations' deficiencies and generally portrayed organizations as offering opportunities. Most of the prescriptive writers sought to raise productivity, efficiency, or morale, but Barnard and Simon saw organizations as offering opportunities to apply social psychology.

5.3.4 The Themes Merge, Organizational Research becomes more Scientific', and Empirical Methods become more Public

The late 1940s and early 1950s saw two changes in the character of writings about organization theory, and Selznick participated significantly in both developments. For one thing, the two streams of thought about organizations—sociological writings about bureaucracy and managerial writings about organizational effectiveness—discovered each other. For another thing, authors began to speak about the empirical bases for their theories.

Selznick (1948) led the integration of sociological and managerial streams of thought. Acknowledging influence by the writings of Barnard, Dennison, Gaus, Mooney and Reiley, and Urwick, he departed from the sociological focus on 'bureaucracy' and framed his discussions in more general language about 'organizations' and 'formal organizations'. He acknowledged as well influence by Parsons, Malinowski, Maclver, and Merton upon his discussion of 'structural-functional analysis', and his overall discussion had a distinctly sociological flavor. Another step in the direction of integration was taken by the *Reader in Bureaucracy* (Merton *et al*. 1952), which drew excerpts from many different sources. March and Simon (1958) pushed integration even farther by drawing ideas and findings from artificial intelligence, cognitive psychology, economics, human-resources management, industrial engineering, industrial psychology, political science, public administration, the psychology of small groups, scientific management, sociology, and strategic management.

As some were integrating the managerial and bureaucracy streams of thought, others were attempting to introduce new themes. Barnard and Simon had advocated the relevance of social psychology, and Simon (1946, 1947) had voiced a need for more 'scientific' studies of organizations. In particular, Simon attacked the idea that principles of organization and management are useful, and he pointed out that every principle seemed to contradict an equally plausible principle. He asserted that a more 'scientific' approach to the study of organizations would eliminate the contradictions. Simon spelled out this idea of a 'scientific' organization theory in three more articles and a book. First, he (1950: 4) predicted, 'we are in time going to
p. 172 have theory in management—theory of the kind that predicts reality, and not the ↳ kind that is contrasted with practice'. As examples of the kinds of theorizing he deemed relevant, he cited game theory, linear programming, servomechanisms, computers, and laboratory experiments with small group communication. Second, Simon, Smithburg, and Thompson (1950) produced a textbook about governmental organizations that discussed many of the topics that have attracted research in the second half of the twentieth century: centralization-decentralization, teamwork, communication, intergroup relations, environmental change, and need for support from external stakeholders. Third, Simon (1952) sketched his vision of the scope of organization theory: decision-making in organizations, power in organizations, rational and nonrational behavior in organizations, stability and change in organizations, specialization and division of work, and relations between organizations and their environments. Finally, he (1952–3) published an algebraic analysis that compared the economic theory of the firm with 'O-theory', in which organizations need only survive, not maximize profits, and participants receive inducements to make contributions.

The general norm throughout the first half of the century was that authors said nothing about their sources of data, and this pattern continued into the late 1940s. For example, the *Journal of Social Issues* devoted one of its first issues to bureaucracy. The contributions to this issue described bureaucracies or their effects (Watson 1945*a*, *b*; Brady 1945), but none of these articles described the bases for their observations. Likewise, Bendix (1947: 507) reviewed assorted issues regarding bureaucracy without identifying a specific organization or organizations. He concluded that 'we cannot profit from the efficiency of large-scale organizations unless we succeed in making the initiative of the individual one of the principles of our organization' without adducing any data, even examples, to support his assertions. Also without identifying a specific organization or organizations, Selznick (1948) portrayed organizations' behaviors as specific instances of 'social action' and advocated the use of 'structural-functional analysis' that seeks to explain observed behaviors in terms of 'stable needs and self-defensive mechanisms' As an example of structural-functional analysis, he discussed organizations' use of cooptation to deal with opposition arising in their environments. Although Selznick's remarks derived in part from his study of the Tennessee Valley Authority, he did not mention this: this omission implies that the norms for sociological research did not require authors to refer to data.

During the late 1940s, some authors began to specify the kinds of data they were using as referents. In some instances, the specifications were quite vague. For example, Turner (1947) reported that navy disbursing officers during World War II did not function as 'ideal-type' bureaucrats insofar as 'rules become of secondary importance' (p. 348). Rules sometimes conflicted with the commands of their superior officers, and the disbursing officers treated their friends differently from others and they engaged in exchanges of
p. 173 favors with officers who controlled ↳ other resources. However, Turner did not describe how he observed navy disbursing officers. Similarly, Worthy (1950) described the use of employee surveys in Sears, Roebuck and Co. without presenting data. He said, 'The results of our research suggest that over-complexity of organizational structure is one of the most important and fundamental causes of poor management-employe relationships.... we have found that where jobs are broken down too finely, we are more likely to have both low output and low morale' (p. 174). In a book that he intended to offer advice to restaurant managers, Whyte (1948) used interviews in Chicago restaurants to illustrate sociological concepts such as social status, clique, race relations, and informal organization. Still another example is Stewart's (1951) report on administrative processes in the Selective Service System during World War II.

Selznick (1949) and Jaques (1951) forwarded data-based research by providing book-length case studies. Selznick used his study of the Tennessee Valley Authority (TVA) to illustrate the use of cooptation. While arguing that 'All formal organizations are molded by forces tangential to their rationally ordered structures and stated goals' (p. 251), he interpreted the TVA's behavior as illustrating 'unanticipated consequence in social action'. Unanticipated consequences occur because focusing on specific goals induces people to overlook seemingly irrelevant events and because commitments made earlier limit later options. However, Selznick's theoretical contributions may have been less influential than his methodological contribution of showing an explicit, detailed example. This methodological contribution demonstrated its transitional character in two ways. First, Selznick devoted only three paragraphs in his Preface to describing his research methodology. Second, he did not discuss the potential influence of his prior beliefs on his observations.

Two years later, Jaques (1951) and colleagues exhibited much more methodological sensitivity in their highly visible and influential case study of Glacier Metals Company. Not only did Jaques devote the first chapter to methodology, but the book contains many comments about data-gathering methods, about premises guiding inferences, and about the relations between the researchers and people in the company. In his Introduction to this book, Wilson (1951: p. xv) observed: 'In scientific work of all kinds there has been a growing realization of the part played by the observer himself as one factor determining his observations. Scientific research in relatively new fields of work shows the importance of the observer describing in detail his role, his methods, and his view of the character and limits of his field of observation.' The case study itself affords a good example of why organization theory should not be separated from organizational behavior, for it traced the interdependencies between the firm's origination, formal structural changes, management changes, internal politics, communication patterns, and people's feelings.

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5.4 Organization Theory Organizes

By the late 1950s, the writings about organizations were multiplying rapidly. *The Organization Man* and *The Man in the Grey Flannel Suit* had made the public aware of organizations' centrality (Whyte 1956; S. Wilson 1955). *Parkinsons Law* had made organizations a topic for laughter (Parkinson 1957). A number of sociologists went beyond the traditional focus on bureaucracy, with studies of diverse 'complex organizations'. Many sociologists published organizational studies during the late 1950s and those who did so came from the elite of American sociology. Political scientists discussed intraorganizational power relations and decision-making in governmental organizations. Economists, who had exhibited great disinterest in organizational factors, began to consider them for the first time when Marschak (1955) discussed the costs of communication within a 'team' and Penrose (1959) discussed the need for managerial activity to plan and implement expansion. Social psychologists discovered organizations as interesting settings for research, although few of them regarded organizations as coherent social systems. March and Simon (1958) provided a compendium that allowed scholars to explore findings and ideas from diverse fields.

By 1960 organization theorists had become much more numerous and many of them had high social status. Organization theory had arrived, and the following decades have offered it the beneficence of multiplying and expanding degree programs in business. Expansion and affluence have brought pressures to fragment and to become self-absorbed and irrelevant to environmental problems.

Pressures for organization theory to become self-absorbed and irrelevant to its environment have arisen partly from its growing size and rising status and partly from the relevance of its subject matter for degree programs in business. Collegiate business programs have provided steady and rapidly increasing funding after 1950. By 1956, nearly 43,000 Americans per year were graduating from collegiate business programs, and by 1998, this figure had more than quintupled to 233,000 per year. In 1956, just over 3,000 Americans per year were graduating from MBA programs, and by 1998, this figure had rocketed to more than 100,000 per year.

As organization theory has become larger and more respected, it has grown more autonomous from external constraints and more organized. Academics have gained latitude to define what is interesting or important to themselves. Research methodology has received ever more respect, and the most prevalent empiricism has been a stylized type that isolates the observer from the observed and allows the observer to maintain detachment. The subtopics within organization theory have proliferated and derived their popularity from their intellectual attractiveness. Organization theorists have created specialized divisions of professional associations and many specialized journals, including a few that have focused on subtopics within organization theory.

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The themes that gave rise to organization theory have received little attention. Few organization theorists have focused on social problems associated with organizations. The old social problems still exist and new ones have appeared, but it is depressing to dwell on what is wrong, and business students are not eager to discuss the disadvantages associated with their future occupations. Few academic organization theorists have sought prescriptions for how organizations can become more productive, efficient, or effective. The frequent management fads—such as Japanese management, downsizing, re-engineering, teamwork, Quality Circles, Six-Sigma quality management, the Learning Organization, outsourcing, knowledge management—have been originated by managers and consultants. Although some academic organization theorists have studied the consequences of such management fads, the most prominent organization theorists have ignored them. The prominent organization theorists have also generally ignored long-run changes in organizations' characteristics that have been stimulated by technological and population

changes such as rising educational levels, computerization, telecommunication capacities, or globalization of firms.

Pressures to fragment have originated in the social sciences that organization theory spans. Whereas hostile environments can induce a collective enterprise to coalesce, multiple but friendly environments create ambivalence about participation in collective enterprise. In the case of organization theory, one force toward fragmentation has come from the divide between psychology and sociology. Many social scientists with psychological orientations have defined their focal interest as 'organizational behavior' as distinguished from 'management' or 'organization theory'. 'Organization theory' has consequently been more closely associated with sociology. A second force toward fragmentation has come from teachers and practitioners of 'strategic management', who sought legitimacy by defining a distinctive behavioral domain. However, boundaries between these topics have remained ill-defined, and they have often contributed to strange interpretations of observations when organization theorists ignored issues they perceived to fall into the neighboring domains. Strategic management has itself shown a tendency to split into two domains, one more closely associated with economics and the other more closely associated with sociology or management. A third force toward fragmentation has been dissatisfaction with the effectiveness of existing social theories, which has induced organization theorists to experiment with a wide range of diverse theories. Because it deals with complex phenomena, organization theory has drawn productively from very diverse intellectual domains. However, newer ideas have supplemented older ideas rather than replaced them. For example, population ecology did not replace contingency theory; it added a dynamic perspective that supplemented contingency theory. As a result, contingency theory retained enthusiastic proponents while population ecology gained others. A fourth force toward fragmentation has been culture, as theories and methodologies have evolved differently in different societies.

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A few integrating activities have restrained fragmentation and kept boundaries permeable. Foremost among these, have been three prominent academic journals that have bridged the fragments and continued to publish articles on diverse topics—*Administrative Science Quarterly, Academy of Management Journal*, and *Journal of Management Studies*. Likewise, the fragments have not affected the major periodicals for managers —such as *Harvard Business Review, Sloan Management Review, California Management Review*, and *Organization Dynamics*. Also, some researchers have crossed the boundaries between domains. For example, some strategy researchers have studied top-management teams, some organization theorists have applied evolutionary models to strategic changes, and some organizational-behavior researchers have studied managers' perceptions of strategic environments.

Organization theory has developed considerable complexity, so much complexity that doctoral students sometimes complain that it makes no sense to them. The students say they do not understand how the fragments of organization theory relate to each other, how they differ, what each has to offer. In particular, recognition has grown that organizations are quite heterogeneous. Since organizations are diverse and complex, and since they inhabit diverse and complex environments, the complexity of organization theory makes sense. But this complexity poses the classical dilemma of how complicated theories should be. Complex theories capture more aspects of what researchers observe, but they are hard to understand. Simple theories are easy to understand but they overlook phenomena that some people deem important.

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Notes

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2 One consequence of the association between writing and organization has been the destruction of historical documents that described organizations. Conquerors and rebels usually destroyed the records of the governments they overthrew.

3 Shenhav (1995) argued that industrial and mechanical engineers were treating organizations as systems between 1900 and 1920. As I read those works, they were talking about the need for systematic (efficient, consistent, orderly) procedures.

4 Despite Fayol's belief that 'administration' had meant only government officials in 1910, just four years later Elbourne (1914) published a large book titled *Factory Administration and Accounts* that assumed readers well understood the usage of 'administration' in the context of factories. However, Lewis's (1896) book on *The Commercial Organisation of Factories* says nothing about 'administration'.
Fayol (1916) formulated a prescriptive 'Administrative Theory' that focused on five functions performed by a managerial hierarchy: planning, organization, coordination, command, and control. He asserted that managers with adequate knowledge of this Administrative Theory could successfully manage organizations of every type. Almost three decades later, Edward H. Litchfield (1956) advocated very similar ideas as the dean of Cornell's Graduate School of Business and Public Administration. Litchfield had been successful as a military, business, and academic administrator. He argued that administration is the same 'in industrial, commercial, educational, military, and hospital organizations'. He launched

*Administrative Science Quarterly*to promote the development of a general theory of the 'administrative process', in which he included decision-making, programming, communications, controlling, and evaluating.