



Organizational social structure

Organization occurs when people learn what can be accomplished by pooling their efforts, resources, power, knowledge, and identities. Adam Smith was the first to explain that when labor is divided in an organized way, groups outperform individuals. Their superior performance is due to greater efficiency that comes with the specialization of workers and coordination of their work tasks. But efficiency is not all that organization makes possible. Groups can accomplish things no individual acting alone could dream to do: space travel, for example.

Of all the concepts used to explain, understand, and appreciate organization and its successes and failures, **organizational structure** has been around the longest and made the greatest impression on organization theory. **Structure** generically refers to the stable relationships among parts of a system or entity. For example, relationships between the foundation, frame, roof, and walls of a building give it the structure needed to stand upright and function as shelter, just as relationships between bones, organs, blood, and tissue structure a human body and enable its life-supporting functions of mobility, digestion, respiration, circulation, and so on.

Organization theorists are particularly interested in two types of structure: physical and social. An organization's **physical structure** refers to the spatial-temporal relationships between its material elements, which includes bodies, buildings, and geographical locations, and consideration of the style, design, heritage, and other

symbolic meanings these embody. The relationships between the roles and responsibilities members assume within their organization, such as the groups or units to which they belong (e.g. offices, departments, divisions), describe elements in an organization's social structure. Social structure arises in, and can be altered by, changing patterns of interaction among its members, while the meanings invested in it provide some with a sense of stability, even in the face of change. Of course, the physical and social structures of organizations are not completely independent. These concepts overlap whenever physical structure influences patterns of human interaction or when interaction patterns are taken into account when designing an organization's buildings. This chapter covers social structure; physical structure will be the subject of Chapter 7.

The historical development of theorizing about organizational social structure begins with Weber's theory of bureaucracy, which you met in Chapter 2. That theory produced the classic concepts of hierarchy, division of labor, and formalization that modernists developed into measurable dimensions to assess these and other aspects of social structure. In this chapter, you will find definitions and measures of the most widely used dimensions and take a close look at three on which modernist organization theory depends—centralization/decentralization, differentiation/integration, and size. A return to Burns and Stalker's mechanistic and organic distinction, explored in Chapter 3, will show how the dimensions cluster to define these two ways of organizing. An introduction to organizational design, along with a typology of organizational forms, will be presented next, covering the gamut extending from traditional and modern to postmodern forms.

The chapter continues with theories of structural change, including two based on evolutionary models taken from the modernist perspective, and one that introduces the symbolic perspective. The latter, structuration theory, looks at how the same structures and practices account for both organizational change and stability. You will then encounter ideas about routines and improvisation and get an introduction to practice theory, all of which take the symbolic perspective and, in one way or another, follow from structuration theory. The chapter ends with three postmodern challenges to

modernist structural concepts—de-differentiation, anti-administration, and feminist bureaucracy—and with the idea of hacking social structures as a means to (re)discover the freedom and creativity that lie within them.

Weber's ideal bureaucracy

Although Max Weber published his theory of bureaucracy in the early 1900s, his work was not translated from German into English until the mid-1940s. The timing of this translation coincided with the birth of organization theory and, for those who forged the modern perspective, gave Weber the status of founder. As you saw in Chapter 2, Weber's theory offered an ideal model for governing organizations and societies, which he believed was preferable to earlier traditional (i.e. feudal) and charismatic forms. The concept of bureaucracy derives from the then-widespread use of the term 'bureaus,' which today we refer to as an organization's units or departments, each with its designated realm of activity. In a way, bureaucracy carries the connotation of arranging, or structuring, people into jobs, jobs into departments, and departments into organizations. The main characteristics Weber attributed to bureaucracy include:¹

- a fixed division of labor;
- a clearly defined hierarchy of offices (i.e. bureaus), each defined by its particular sphere of competence;
- a set of general rules governing the performance of offices—strict discipline and control in the conduct of the office;
- candidates selected on the basis of technical qualifications and appointed, rather than elected, to office;
- officials remunerated by fixed salaries paid in money;
- the office as the primary occupation of the office holder, which constitutes their career;
- promotion granted according to seniority or achievement, as assessed by superiors;

- official work separated from ownership of the means of administration.

Weber's use of the term 'ideal' might not be what you expect; he used it in the sense of a pure idea—something that can only be known through imagination—rather than a perfect or desirable entity or existential state. In his original discussion of ideal types, he compared them to similar notions in other academic disciplines, such as ideal gases in physics or ideal competition in economics. Ideals in Weber's usage do not indicate goodness or virtue; instead, their abstract nature makes them a useful basis for theorizing, even though we cannot expect them to exist in an imperfect world.

Weber himself recognized the potential for trouble, warning that bureaucracy could easily become an iron cage imprisoning all who wandered into its clutches. Charlie Chaplin satirized Weber's warning in his 1936 film *Modern Times*, which showed its protagonist, an industrial worker, comically caught up in the gears of a giant machine. Contemporary novels and films have advanced the criticism: Read Joseph Heller's novel *Catch-22* or watch Terry Gilliam's film *Brazil*, for example, both of which use dark humor to satirize the dangers of overreliance on bureaucratic formalities. Weber pointed out that when organizations are large and operate routine technologies in fairly stable environments, bureaucracy offers benefits enough for many societies to continue to create and maintain numerous bureaucratic organizations in spite of distaste for the bland work they require and frustration with the red tape they often generate.

Today, you will find bureaucracy in most governments, nearly every university and religious institution, and many large international aid organizations, such as the Red Cross. But you will also find most large corporations moving away from bureaucracy due to the increasing pace of environmental change they face and their consequent need for rapid and continuous adaptation—demands that bureaucracy cannot meet.² Some will have greater success than others, however, in large part because bureaucracy is hard to turn down. It promises consistently reliable decision-making, merit-based and fair selection and promotion, and the impersonal application of rules.³

Organization theorists who adopted the modern perspective defined organizational social structure using three core aspects of Weber's bureaucracy that remain relevant to the study of organization theory: division of labor, hierarchy of authority, and formalized rules and procedures.

Division of labor

Division of labor refers to splitting the work of the organization among employees, each of whom performs a piece of the whole output-generating process. It distributes responsibilities and assigns work tasks. When labor is properly divided, the combination of work tasks produces the desired output of the organization with efficiency and effectiveness. Adam Smith's description of pin-making, as discussed in Chapter 2, provided a simple example of how the division of labor organizes work (one draws out the pin, while another attaches the head, and so on), but you can easily think of other examples, such as the assembly line that produces automobiles, or the processes that provide banking, education, or healthcare services.

The ways in which tasks are grouped into jobs and jobs into organizational units is also part of the division of labor. Grouping similar or closely related activities together into organizational units produces departments (e.g. purchasing, production, marketing) and/or divisions (e.g. consumer products, international sales) from which organizational structures are built. The grouping of work into units is called departmentalization. Because administrators or managers typically oversee the units and subunits created by departmentalization, the division of labor is closely related to hierarchy of authority, the second component that Weber contributed to the definition of organization structure.

Hierarchy of authority

Distributing authority in an organization produces hierarchy. Some people believe that hierarchies are a fundamental aspect of life; they

find evidence to support their belief in the pecking order observed among chickens and the way wolves and dogs demonstrate domination and submission to each other and to humans. Organizational hierarchies, they believe, are the human form these tendencies assume. Of course, others argue that nonhierarchical organizations based on egalitarian values demonstrate that humans can overcome natural hierarchical tendencies, or never had them in the first place.

Regardless of whether or not you agree that hierarchy is natural, you will probably recognize it as a feature common to most, if not all, organizations. According to Weber, positions higher in the organization's structure confer legal authority to make decisions, give direction, and reward and punish those positioned lower in the hierarchy. One's authority is strictly a matter of position and is relative to that of others. Moreover, authority belongs to the position, not the person who occupies it; when an individual retires or moves to a new position or a different organization, the authority of their former position remains behind to be assumed by their successor.

An **organizational hierarchy** defines formal reporting relationships such that it maps the organization's vertical communication channels—downward (directing subordinates) and upward (reporting to management). When each position in an organization is subordinate to only one other position, what Fayol called the scalar principle, authority and vertical communication combine to permit the most highly placed individuals to efficiently gather information from, and to effectively direct and control the performance of, all individuals throughout the organization.

In the past, many managers applied the scalar principle to their organizational structures; however, dual reporting relationships are now quite common, as are lateral connections used to integrate an organization's diverse activities and promote flexibility of response to environmental pressures. Weber's third component of social structure—rules and procedures—can be used as a substitute for hierarchical authority. Rules and procedures can replace some of the control lost when hierarchical authority structures are flattened or when work is geographically distributed across large distances, as happens in many international organizations.

Formal rules and procedures

The extent to which explicit rules, regulations, policies, and procedures govern organizational activities defines an organization's degree of **formalization**. Indicators of formalization include the existence of written policies, handbooks, job descriptions, operations manuals, and organization charts, and the use of management systems such as management by objectives (MBO), technical systems such as program evaluation review techniques (PERT), and operational systems such as supply chain management. Formalization through the specification of rules, procedures, position descriptions, and job classifications tells employees how to make decisions in their realm of authority and how to perform their assigned work tasks.

Along with strict observance of positional authority, formalization contributes to the feeling of impersonality often associated with bureaucratic organizations. It reduces the amount of discretion that employees have in performing their work tasks, while increasing the control that managers maintain over their employees. Studies have shown that formalization tends to discourage innovation and suppress communication.⁴ By contrast, the lack of formalization, sometimes referred to as informality, denotes the flexibility and spontaneity of nonbureaucratic organizations.

Key dimensions of organizational social structures

Inspired by Weber's theory, early modernist organization theorists developed a variety of dimensions to be used to assess and compare organizational social structures. The most influential of these appear in Table 4.1, three of which—centralization/decentralization, differentiation/integration, and size—will be discussed in detail to show how they relate to the Weber's theory of bureaucracy. Notice that common ways in which to **operationalize** these dimensions in order to measure them empirically are shown on the right side of Table 4.1. Empirical studies using the operationalized dimensions generate,

refine, and improve theory, as you will see in the next section of the chapter, which revisits structural contingency theory.

Centralization/decentralization

The dimension of **centralization/decentralization** figures prominently in most theories involving organizational social structure. Often defined in relation to hierarchy, it suggests how those at the top choose an appropriate leadership style. In a centralized organization, control is maintained by making decisions almost exclusively at the top of the hierarchy and by expecting employees to accept the decrees of their executives without question. However, because centralization minimizes participation among lower-level employees, it can leave those lower in the hierarchy feeling uninvolved in the organization, and can impede their understanding and dampen their enthusiasm for achieving its goals.

By contrast, decentralized organizations rely on the participation of many members of the organization in decision-making processes, and so encourage a sense of involvement and feelings of responsibility for outcomes. However, because decentralized organizations are more difficult to control, their executives have to be willing to accept a certain amount of control loss and the leadership style that this implies. In the main, leaders of decentralized organizations forsake the role of directing and controlling organizational activities, and adopt instead the roles of inspiring, supporting, and facilitating other organizational actors.

There is more that you should grasp about the dimension of centralization/decentralization, however. While measuring the social structures of 52 different organizations in the UK, a group of researchers from Aston University assessed the hierarchical level at which 37 common decisions were made.⁵ In a survey administered by the researchers, respondents were asked to name the level in the organization that had the authority to make each decision. The researchers then averaged the data for all 37 decisions to create an overall centralization score for each organization. But this score did not correlate as strongly with other measures as they had expected it

would, so the researchers broke down the centralization measure according to type of decision made. A replication of the study revealed that while an organization may be highly decentralized with respect to work-related decisions, it can also be highly centralized with respect to strategic decisions.⁶

Table 4.1 Dimensions of organizational social structure in common use by structural contingency theorists

Dimension	Operational measure
Size	Number of employees in the organization
Administrative component	Percentage of total number of employees who have administrative responsibilities, often broken into <i>line functions</i> (departments involved directly in the production of organizational outputs) and <i>staff functions</i> (departments that advise and support line functions with strategic planning, finance, accounting, recruitment, training, etc.).
Differentiation	<i>Vertical</i> , shown in the number of levels in the hierarchy, or <i>horizontal</i> , reflecting the extent of the division of labor as shown in the number of departments or divisions spanning the entire organization and sometimes reflected in the average span of control of managers.
Integration	Extent to which activities are coordinated across the organization using accountability, rules and procedures, liaison roles, cross-functional teams, or direct contact.
Centralization	Extent to which authority to make decisions concentrates at top levels of the organization; in <i>decentralization</i> , decision-making is spread across all levels in the hierarchy.
Standardization	Extent to which standard procedures govern the organization's operations and activities rather than individuals using their judgment and initiative to respond to events as they arise.
Formalization	Extent to which an organization uses written (i.e. formal) job descriptions, rules, procedures, and communications, as opposed to communication and relationships based on informal, face-to-face interaction.
Specialization	Extent to which the work of the organization is divided into narrowly defined tasks assigned to specific employees and work units.

You can see how this happens in universities, for example. In these organizations, decisions about course offerings, new faculty hires, and the distribution of travel funds are typically made in the academic departments, so you would consider these decisions to be decentralized. Decisions about university fundraising campaigns or charting new directions for university growth are centralized at the level of the university president and board of trustees. As often happens in empirical studies, by dropping down one level or unit of analysis, the Aston researchers discovered a more complicated picture that informed their findings. This study allowed the researchers to recognize that, within a single organization, different types of decision occurred at different levels of the hierarchy, thus producing mixed results on an organizational centralization scale. This does not mean that organizations cannot be compared at the organizational level of analysis as more, rather than less, centralized; it just means that one must be concerned with what measurements were taken in any study and use this information when interpreting its findings.

Differentiation/integration

Paul Lawrence and Jay Lorsch used a departmental level of analysis to interpret the findings of their study of the performance of a group of chemical-producing companies.⁷ Their study revealed the importance of differentiation and integration as dimensions of organizational social structure. They defined differentiation as the separation of the organization into structural units having different tasks or functions. They found, for example, that sales departments focused on delivering customer satisfaction and building relationships with customers, while production departments focused on efficiently using labor and equipment to maximize production and minimize the time and resources required to produce products, to retool equipment, and to change work processes for individual orders. Lawrence and Lorsch's study showed that differences in tasks produced differences of orientation that led, at times, to conflict between departments, especially when performance measures were tied to substantial rewards. The differentiation of departments kept conflicts from

interfering with the performance of work and thus improved the performance of the company overall.

Organizing to accommodate specialization produces **horizontal differentiation** in the organizational structure, which can take the form of units organized by function, as was the case for the organizations Lawrence and Lorsch studied, or by products produced, services provided, clients served, processes used, or location. According to Lawrence and Lorsch, horizontal differentiation produces the need for oversight and communication to achieve integration among the various activities. They defined integration as the collaboration required to get everyone pulling in the same direction so as to achieve unity of effort.

Since the most common organizational integration mechanism is hierarchy—creating formal reporting relationships that allow managers to coordinate activities and resolve problems by exercising their authority—integration is often achieved by elaborating the hierarchy through **vertical differentiation**. Thus differentiation and integration bear an interesting codependent relationship: Adding hierarchical levels to achieve integration of horizontally differentiated units creates vertical differentiation, which then requires even more integration. Hierarchy has limits where an organization's need for integration is concerned. Thus organizations must turn to other aspects of structure to provide integration mechanisms.

Other integration mechanisms available to organizations include formal rules, procedures, and scheduling, as well as liaison roles, committees, task forces, cross-functional teams, and direct communication between departments. For example, an organization might have a technical sales engineer in a liaison role to talk with the customer and to coordinate with purchasing, production planning, production, quality control, finance, and the legal department to ensure a contract is satisfactorily completed on time. A hospital might have a cross-functional team of medical, nursing, therapy, finance, and social services staff to manage an individual patient's healthcare program.

Size

The Aston research that produced the findings on centralization/decentralization also revealed that **organizational size** interacts with other dimensions of social structure in unexpected ways. Data collected measured six dimensions of organizational structure in 52 organizations: specialization, standardization, formalization, centralization, configuration, and flexibility. Findings showed that when centralized organizations are large, decision bottlenecks can undermine organizational performance by slowing organizational responses to environmental pressure. This finding explained why most studies of large organizations had indicated a negative relationship between formalization and centralization—namely, that these organizations can trade centralization for formalization because formal rules and procedures direct subordinates to make the same decisions managers would make. Thus large decentralized organizations, including most bureaucracies, are more likely to be formalized than are large centralized organizations.⁸

This finding solved what was once puzzling to organization theorists. Like them, you too may think that ‘mechanistic’ and ‘bureaucratic’ are two words for the same thing. Experience with bureaucracies often creates this belief because the image of an unfeeling machine fits with the red tape associated with bureaucracy. Notice, however, that there is one feature of bureaucracies that distinguishes them from mechanistic organizations: The bureaucracy is *decentralized*, whereas the mechanistic organization is centralized. The trick to resolving the puzzle is to understand what it means to say that a bureaucracy is simultaneously highly formalized and decentralized. In a bureaucracy, many routine decisions are pushed to low levels of the organization, but there are strict rules and procedures that govern how those decisions are made. Thus street-level bureaucrats (police, social workers, teachers, clerks, etc.) often have discretion, but can only exercise it within strict limits. Like mechanistic organizations, the bureaucracy remains highly controlled, but it does so by being decentralized in such a way that allows lower-level bureaucrats to make all the programmed decisions, while freeing higher-level bureaucrats to form policy and make nonroutine decisions, including any decisions that have yet to be programmed.

Another look at structural contingency theory

Contingency theorists attempt to specify the best fit between the design of organizational structures and their environments. Their normative aim is to maximize **organizational performance**, modernist measures of which range from financial profit and return on investment (ROI), job satisfaction, and employee turnover, to sales revenue and market share. Factors inspired by the symbolic perspective, like brand equity and corporate reputation, eventually expanded the list of performance indicators, while postmodern influences have pressured organizations to assess their performance on the bases of social responsibility and environmental sustainability.

In Chapter 3, you were introduced to characteristics of the environment on which the best structure for a particular organization is contingent—complexity, rate of change, and uncertainty. So far in this chapter, you have learned about different dimensions of social structure. Contingency theorists use these, and others they continue to add, to refine their theory. Operational measures allow them to calculate which organizational structures maximize performance by best fitting the environments they serve, as you will see in the following discussion.

The structural dimensions of mechanistic and organic organizations

In Chapter 3, you learned that Burns and Stalker found that mechanistic organizations outperformed organic organizations in stable environments, but in unstable environments organic organizations were more successful. The structural dimensions shown in Table 4.2 helped the researchers explain why.⁹

Once Burns and Stalker defined mechanistic and organic forms in terms of the dimensions of their social structures, they were able to propose that high levels of hierarchical control, clearly defined roles and tasks, and centralized decision-making all undermine the advantages of flexibility and creativity associated with organic forms.

This led them to theorize that the need for **innovation** limits the success of mechanistic forms of organizing, thus adding a new contingency factor. Expressed in the terms of contingency theory, demand for innovation constitutes an environmental contingency that differentiates organizational forms in relation to their environment such that the greater the demand for innovation coming from the environment, the greater the advantage to organic forms of organization.

Burns and Stalker’s extension of contingency theory explains why organic organizing will be preferred under conditions of high need for innovation. First, organic organizations can better satisfy innovation needs because employees enjoy greater discretion in performing their tasks and are not bound to follow formalized rules and procedures. In addition, decentralized decision-making pushes authority and responsibility to lower levels of the hierarchy, which means that employees hired for their knowledge and expertise have the discretion to use their skills and training, and the flexibility to experiment and solve problems as they arise (see Box 4.1). In organic forms, so the theory goes, systems and people are more proactive and adaptable to changing circumstances. In rapidly changing environments, where organizations need to innovate to survive, organizations benefit from having teams of knowledgeable employees working together to anticipate and respond quickly to shifting environmental demands.

Table 4.2 Comparison of the characteristics of mechanistic and organic organization

Mechanistic structures (produce predictability, accountability)	Organic structures (support flexibility, adaptability, innovation)
High horizontal and vertical differentiation—a hierarchical structure of authority and control	Highly complex horizontal and vertical integration—a network of authority and control based on knowledge of the task
High formalization—the definition of roles, responsibilities, instructions, and job methods is stable	Low formalization—tasks and responsibilities are redefined depending on the situation or as the situation changes

Centralization—decisions made at the top of the hierarchy	Decentralization—decisions made by those closest to and most knowledgeable about the situation, and/or by those with responsibility for implementation
Standardization through written rules and standard operating procedures	Mutual adjustment and redefinition of tasks and methods through joint problem-solving and interaction
Close supervision; authority and prestige based on position	Personal expertise and creativity without supervision; prestige attached to expertise
Vertical (superior–subordinate) communication in the form of instructions	Frequent lateral communication, often in the form of consultation between people from different departments

Box 4.1 Case example

McDonald's

Large organizations that exist in stable environments and provide standardized services or products operate most efficiently when they use mechanistic forms, but as environments change, organizations need to change also. You may be familiar with McDonald's—the hamburger organization that operates under the sign of the Golden Arches. As of 2012, McDonald's had 33,000 restaurants in 119 countries, with 1.7 million employees serving in excess of 68 million people every day, with the goal of being their customers' favorite place and way of eating.¹⁰

At the end of the twentieth century, McDonald's was widely respected for its size, its centralized and standardized structure, and its high degree of formalization, which included an operations manual over 400 pages long. Uniformity of product offerings and retail design meant you could instantly recognize McDonald's anywhere in the world and know exactly what you could buy there. The company was the epitome of the mechanistic organization. But increasing competition and changes in nutritional habits have changed all that, leading McDonald's in the direction of a more flexible, organic approach.

In 2005 the McDonald's website described structural changes under way in these terms:

Decentralization is fundamental to our business model—and to our corporate responsibility efforts. At the corporate level, we provide a global framework of common goals, policies, and guidelines rooted in our core values. Within this framework, individual geographic business units have the freedom to develop programs and performance measures appropriate to local conditions.¹¹

Since then, McDonald's has seen growth in the number of innovative changes that are pushing it out of its mechanistic past.

Among the innovations that McDonald's has seen are a customizable burger option implemented in the chain's Australian restaurants, delivery service in New York City, and Free Fruit Fridays for UK customers ordering a Happy Meal.¹² In the UK, McDonald's is experimenting with composting and highly informative nutrition labels. In addition, it now offers organic milk and coffee in all its restaurants. In the United States, the Egg McMuffin, now available all day, uses real butter and cage-free eggs. The organization is clearly adapting to changes in its environment that show that McDonald's is becoming much more organic.

Questions

Can you think of other mechanistic organizations that are under pressure to adopt organic characteristics? What is happening in their environments that might account for this change? What contingency factors does your analysis reveal?

Levels within organizational structures

Lawrence and Lorsch's research provides an example of how contingency theory becomes refined. In their case, refinement came from dropping from the analytical level of organization to that of departmental units. By looking at the organizational structures of different departments, they realized that organizations can contain many different structures and that these structures are contingent upon the degree of stability in their environment.

In their 1967 study of six organizations in the plastics industry, which, at the time, was a complex and unstable environment, Lawrence and Lorsch found that organizational departments were confronted with different degrees of uncertainty that caused each department (sales, production, applied research, and fundamental research) to differentiate from the others.¹³ Using four measures of differentiation—degree of formality, relative amount of attention given to task performance and relationship building, orientation to time, and goal orientation—their data revealed that:

- departments operating in the most stable environments (production) were more formalized and hierarchical, and carried out more frequent performance reviews, than those facing environmental uncertainty (R&D), with sales and applied research departments falling in between these two extremes;

- departments with greater task uncertainty (sales) were more relationship-oriented than departments facing less task uncertainty (production), which were more task-oriented;
- sales and production departments held short-term orientations and required rapid feedback on results, while R&D departments had long-term orientations (of at least several years out, depending on the length of their projects);
- the goal orientations of sales departments were towards customer issues, while production had a goal orientation defined by cost and process efficiency.

In a follow-up study, Lawrence and Lorsch focused on the relationship between environmental stability and social structure. They selected two organizations from the packaged foods industry, an industry at the time confronting an unstable environment with many diverse elements, and two from the container industry, where a stable environment prevailed. They concluded that high-performing organizations had the appropriate degree of differentiation for their environments and used forms of integration consistent with the coordination demands of their differentiated activities. Moreover, they found that:

- unstable environments required a higher degree of differentiation than stable environments in order to meet varying and complex demands;
- both stable and unstable environments required a high degree of integration, but the means of integration differed—in stable environments, hierarchy and centralized coordination were favored, whereas in unstable environments, there was a need to push decision-making to lower hierarchical levels so that problems could be dealt with through direct communication with those possessing relevant knowledge.

Lawrence and Lorsch concluded that appropriate levels of differentiation and methods of integration vary depending on the particular unit of the organization in question and the segment of the organization's environment with which that unit interacts. An

implication of their work is that, in complex environments, organizations differentiate such that different departments serve different segments of the environment, thus mapping their internal complexity onto the external complexity they face in order to achieve goodness of fit with their environment (see Box 4.2). In these terms, Lawrence and Lorsch's data showed that goodness of fit correlated with higher levels of performance in the sample of businesses and departments they studied.



Box 4.2 From theory to practice

Applying levels of analysis to an organization

You can experience how different levels of analysis affect perceptions of an organizational structure using the example of a university. At the level of departments, most administrative work in the university is done in mechanistic ways, while the best faculty research and teaching evidences the organic form of organization. Dropping another level of analysis to the level of tasks reveals that all jobs have both mechanistic and organic elements. Teaching, for instance, is partly mechanistic (e.g. testing knowledge, reporting grades) and partly organic (e.g. designing curricula, facilitating group learning experiences, answering student questions).

At the even lower level of subtasks, additional organic and mechanistic distinctions can be made. Testing tasks have organic components that include defining what knowledge is important, composing items on tests to measure learning, and combining test questions into an exam format, while mechanistic components of testing include overseeing those taking the exam, scoring test items, and assigning grades, any of which can be seen to be composed of some elements that are mechanistic and others that are organic, and so on down through lower and lower levels of analysis. At the level of the subtask of assigning grades, most university teachers find that assigning a top or a failing grade is mechanistic, whereas figuring out where to draw the line between exams that fall into the middle range is not straightforward and therefore is a much more organic process.

Exercise

Choose any organization with which you are familiar other than your university. You might use your family, a religious institution to which you belong, an organization for which you have worked, or any organization that interests you and with which you have familiarity. Analyze this organization by specifying its subunits or departments, the jobs at least one of the units requires, and the tasks and subtasks that comprise one or more of the jobs in that unit. By analyzing an organization from different levels, you will help yourself to understand how organization theorists approach their theorizing and what they need to consider when they apply their theories to actual organizations.

The lessons of contingency theory

Contingency theory makes it clear that there is no one best way of organizing. Many different ways of organizing prove successful depending upon the environment in which the organization operates and, as you will soon see, on the organization's technology and possibly culture as well. Specifying what constitutes successful organizing remains an ongoing problem for contingency theorists, who continue to refine, study, and identify new factors that they can then measure and correlate with measures of organizational structure.¹⁴ Their ongoing discovery process leads to refinements of contingency theory that suggest other factors and dimensions, as shown in the examples provided by Burns and Stalker and by Lawrence and Lorsch.

Critics argue that the endless discovery of additional factors and dimensions to measure poses limits to the value of contingency theory due to the theoretical problem of **overdetermination** and statistical problems associated with **multicollinearity**. You might say that contingency theory suffers from an overabundance of knowledge. It certainly is in need of new approaches to estimating the causal probabilities of the outcomes it wants to explain. In spite of its challenges, though, contingency theorists continue to offer advice to managers eager to know how best to organize.

Types of organization and organizational design

For purposes of identification, categorization, and comparison, organization theorists offer a variety of organizational types, often described by constellations of structural dimensions depicted using organization charts (e.g. Figures 4.1–4.6). An **organization chart** is a tool for mapping the structure of roles and responsibilities distributed throughout an organization, and is a useful guide when designing or redesigning an organization's structure and communicating how it will be implemented. These charts provide a fairly clear representation of

the hierarchy of authority and a general idea of the division of labor, but are not able to depict **coordination mechanisms** such as liaison or other lateral relationships (although these are sometimes partially represented with dotted lines), or the effects of power flowing outside formal hierarchy. Moreover, as organizing moves toward constant flux, the charting of structures becomes less relevant or is replaced by depictions of *organizing*, such as supply chains that map the flow of resources to be transformed as they pass through a production or service delivery process (as shown in Figure 4.6).

Composing and broadcasting typologies based on a subset of generic organizational forms has been a central practice among members of the field of **organizational design**. This field offers normative guidance derived from research findings supplied by mostly modernist research. It assumes that the type of structure determined as best can be adopted by management decree—an assumption questioned by symbolic and postmodernist researchers, who prefer less objectivist definitions of social structure. Nonetheless, the practice of designing organizations continues. In what follows, the most commonly referenced types of organization are presented. The typology offered begins with simple structures and ends with complex structures, some of which align with the postmodern perspective. You will see in these descriptions what is known or has been theorized about the merits and drawbacks of each type.

Simple structure

Extremely small organizations often appear to have little, if any, formalized social structure or rules. Characterized by completely flexible social relationships with limited differentiation, the **simple structure** evidences almost no hierarchy. There is little need for delegation and little opportunity for specialization since everyone works, more or less, side by side to get the job done.

In a simple structure, the assignment of tasks, whether determined by management decree or by mutual agreement, is open to direct and informal coordination and supervision that occur as part of the flow of activity because those in authority are constantly available for

consultation and instruction. Simple organizational designs are characteristic of newly formed organizations (e.g. an entrepreneurial venture with one or only a few employees) or permanently small organizations (e.g. a medical or dental practice having only one doctor or, at most, a few). They also occur in prototype laboratories, in product design or project teams, in cross-functional management groups, and in some subunits of large organizations (e.g. research and development labs), or they can result from the dismantling of one or more of the structures produced by the following organizational designs.

Functional structure

When an organization grows too complex to maintain a simple structure, its growing differentiation will be reflected in the **functional structure** that emerges. Functional designs are so called because they group activities according to similarity in the nature of the work performed. Within each unit of a functional structure, people do related and/or interdependent work and strive to accomplish a particular set of goals. Figure 4.1 depicts a generic functional organization.

Take, for example, a typical manufacturing organization with jobs grouped into line functions responsible for purchasing, sales, engineering and production (a.k.a. operations), and staff functions including personnel (or human resource management, a.k.a. HR), accounting, finance, marketing, research and development, public relations, communication, and facilities management. Functional designs are also commonly used by many government organizations, as shown in Figure 4.2, the organization chart for the city and county of Honolulu, Hawaii.¹⁵

Functional designs maximize economies of scale resulting from specialization and thus are efficient in their ability to limit duplication of effort. Their transparent logic allows employees to easily recognize the connections between the tasks performed within their unit and the tasks others perform. For example, marketing department staff can easily differentiate their work from that of the accounting, sales, and manufacturing departments.

There are several downsides to functional structures. One is that the goals of different units may come into conflict. Another is that employees may develop greater loyalty to their function than to the organization as a whole. These problems can produce **functional silos**, a metaphorical reference to the towering grain storage containers found on farms standing side by side to manage and protect their contents. It falls to top executives to coordinate the activity of the functions, an arrangement that may give the chief executive officer (CEO) tight control in the sense that she or he is the only person with the big picture regarding what everyone else in the organization is doing. However, tight control can be a major shortcoming. For example, as the solitary pinnacle of authority, the top manager can easily become overburdened with decision-making responsibilities, particularly when the organization starts to grow. And, because no one else in the organization has the same breadth of perspective and responsibility, if the top manager is suddenly lost, other managers in the organization will likely be ill prepared to take over.

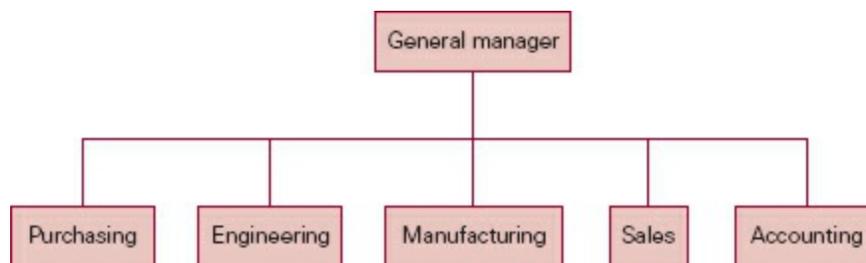


Figure 4.1 An organization chart showing a functional design.

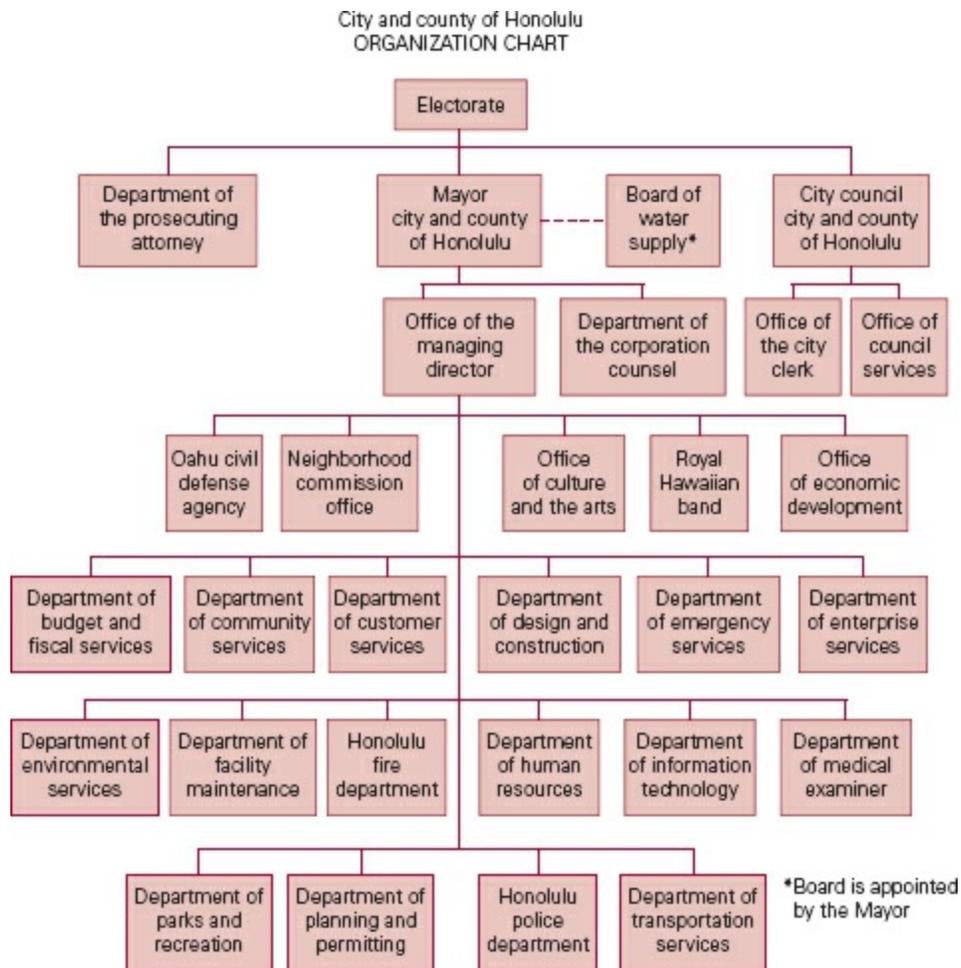


Figure 4.2 Organization chart for the city and county of Honolulu.

Multidivisional (M-form) structure

When an organization outgrows a functional design, it usually creates multiple divisions in order to distribute the organization's decision-making load across a greater number of executives. The **multidivisional structure**, or 'M-form' for short, consists of a set of separate, often functionally structured, organizations, each run by a dedicated management team that reports to executives based at headquarters (see Figure 4.3). The management of each division handles the day-to-day internal operations of the business or businesses for which they are responsible, while the headquarters staff assumes responsibility for financial controls, policy-making and

long-range strategic developments, as well as HR, which includes management training and organizational development. Top executives focus on formulating the strategic direction, capital investment, and budgeting procedures, and on the creation, acquisition, or divestment of divisions.

Multidivisional organizations group people, positions, and units in one of three ways: by similarities in products or production processes, by customer type, or by geographical region of activity. For example, in 2015 the NASA Glenn Research Center in the United States had five directorates (Mission Support, Aeronautics, Science, Human Exploration, and Space Technology), each of which was subdivided into missions, with a sixth directorate for Mission Support.¹⁶ British Telecommunications (BT) is divisionalized by customer type, with six divisions: Consumer (residential customers), EE (retail store customers), Business and Public Sector (business and public sector customers), Global Services (worldwide business services and solutions), Wholesale and Ventures (other communication providers), and Openreach (providing all companies with equal access to BT's local access network in the UK), all of which are managed by the holding company BT Group plc.¹⁷ The US Geological Survey (a department within the US Department of the Interior) is structured into seven geographic regions: Southeast, Northeast, Midwest, Southwest, Northwest, Pacific, and Alaska.¹⁸

Organizations that adopt a multidivisional structure are rarely as profitable as those using functional designs. This is because the M-form organization duplicates every function within each of its divisions. To the extent that the work these functions perform is redundant, M-form organizations will be more costly to operate. The redundancy can be reduced by centralizing some functions (e.g. sales force, supply chain); however, coordination costs are higher due to the larger size of these organizations, and the advantages of responsiveness to the market will be lost if the organization moves too far back toward a fully centralized functional design. The costs of integration are also greater for M-form organizations. They have a greater need for costly executives to coordinate their multiple divisions, which are often geographically separated and can be, in the case of **conglomerates**,

spread across industries as well. Therefore control systems, travel expenditures, and demands for communication all increase the costs of integration for M-form organizations.



Figure 4.3 An organization chart showing a multidivisional design.

In spite of the drawbacks, the M-form has several advantages to recommend it. The first of these is size. Multidivisional organizations consistently grow larger than their functional counterparts. Size gives organizations a competitive advantage in that large organizations have greater influence on their environment and usually occupy more central positions in their inter-organizational networks than do small organizations. Larger organizations can typically hire the best executives because most are attracted to the power and influence large organizations command, not to mention the salaries they offer. Furthermore, the resources that are under the control of large organizations give them more opportunities to broaden their competitive activities both domestically and abroad. The M-form also provides better training for future executives than does the functional structure: Divisional managers operate with roughly the same perspective and set of responsibilities as would the president of a functionally designed organization, and members of headquarters staff acquire broad-based experience that they are unlikely to gain within the functional form.

M-form organizations offer enhanced responsiveness to the needs of customers because the specialization within the organization allows greater focus on the businesses each division operates. Their

multidivisional designs allow for accountability based on divisional profits, which is not possible in a functional structure where greater interdependence makes each department's profitability impossible to determine. The profitability of each independent division, by contrast, can be determined and used to compare it with both internal and external competitors. However, recognize that each division faces the internal problem of functional accountability, and the intense focus on profitability and cost reduction can produce a lack of attention to other crucial aspects of management.

Matrix structure

The matrix design was developed to combine the efficiency of the functional design with the flexibility and responsiveness of the multidivisional form (Figure 4.4). You can think of matrix organizations as having two structures, each of which is the responsibility of a different group of managers. Managers on the functional side of the matrix are responsible for allocating specialists to projects, helping them maintain their skills and acquire new ones, and monitoring their performance with respect to the standards of their functional specialty. Managers on the divisional or project side of the matrix are responsible for overseeing specific projects: planning, allocating resources, coordinating work, monitoring task performance, and ensuring that project requirements and deadlines are met. The goal of project managers is to bring the project to completion on time and within budget.

The greatest difficulty with the matrix design lies in managing the conflict built into the dual lines of authority faced by employees working inside the matrix. Functional managers expect project team members to meet the requirements of their specialty, while project managers want them to adjust to the requirements of the rest of the project team and meet or exceed customer expectations. Thus matrix employees confront the contradictory expectations of performing complex tasks to high-quality specifications, while at the same time facing pressure to minimize costs and meet tight schedules. When employees serve on more than one project team, they face added

pressure to meet the conflicting demands of multiple project leaders and teammates. You should recognize, however, that this conflict also provides the primary benefit of matrix structures: They promote simultaneous attention to both functional standards and project goals.

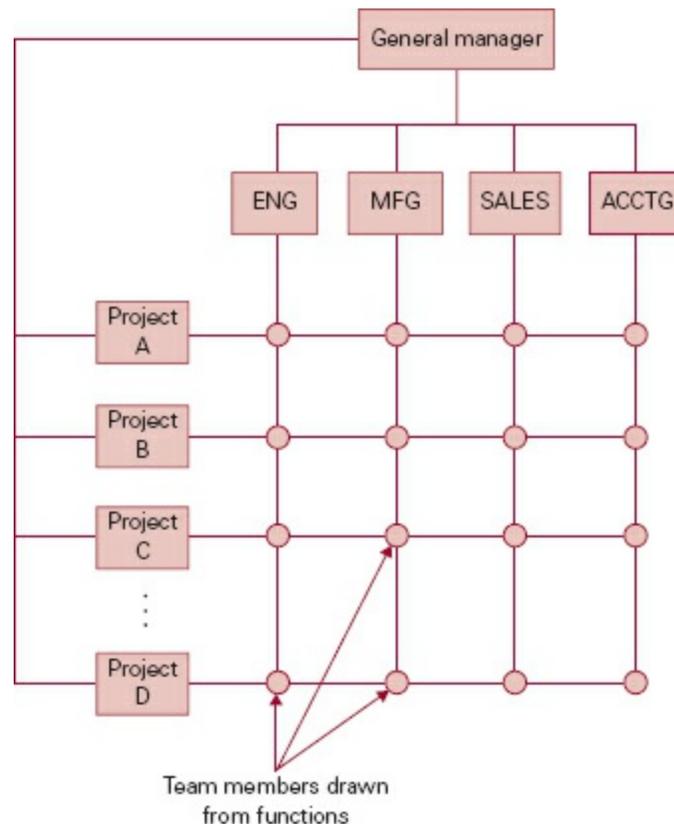


Figure 4.4 An organization chart showing a matrix design.

Conflict in a matrix structure is also built into the jobs of functional chiefs, project bosses, and the executives who oversee their work. For example, conflict frequently emerges between functional chiefs and project bosses over the assignment of persons to projects. Obviously, some individuals and some task assignments will be preferred over others, and political maneuvering is to be expected in regard to project team assignments. The person who oversees the matrix structure as a whole needs to balance the functional and project interests to be certain that one side of the matrix does not dominate the other.

In spite of the conflicts and pressures inherent in a matrix, this

organizational design has offsetting advantages to recommend it. One is the enormous flexibility of its project structure. Within both functional and multidivisional designs, starting up a new activity generally requires a major structural adjustment (i.e. adding a responsibility to every function or creating a permanent new division), whereas starting a new project is a common event within matrix organizations that only requires naming a project manager and recruiting a team. Thus a matrix retains the flexibility of the M-form to provide customer service and respond to opportunities in the environment without making the structural divisions permanent.

Another advantage of matrix designs derives from their unique ability to maximize the value of expensive specialists. This is because the talents of specialists can be pooled for use among a wide variety of projects, some of which may be otherwise unrelated and thus likely to remain structurally unconnected in the M-form. Although the individual specialist will have to deal with the fragmentation that this disconnectedness implies (e.g. working on two or more unrelated projects for project managers who have little concern for the specialist's competing responsibilities), from the perspective of the organization the sharing out of specialized capabilities creates the considerable efficiency that the functional design offers relative to the M-form. This is because where the M-form would hire potentially redundant specialists for each of its divisions, the matrix can more easily use its specialists to their full capacity. Of course, any imbalances between the functional and project sides of the matrix can result in loss of either flexibility or functional efficiencies, or both.

Global matrix

In these days of increasing international competition, many organizations strategically position themselves to take advantage of global opportunities. An organization that desires to move beyond a purely domestic orientation to operate on a multinational, or even global, scale will undergo structural adaptations that previous designs do not adequately describe. These adaptations tend to happen in stages. For example, a functionally designed organization just

beginning to market its output abroad, or to take advantage of low-cost foreign labor to produce products for its domestic market, will generally form a new department to handle the details of import and export, usually by subcontracting with experts in the markets in which the organization wants to be involved. At this stage, the organization is really not multinational because it remains committed to the logic of its domestic business, but it has started the differentiation process that leads to globalization by adding a new structure to handle international business relationships.

As its international business grows and the organization becomes aware of additional opportunities abroad, it becomes more experienced, at least in one or a few of its foreign locations. At this point, many of the activities that were originally subcontracted will be brought in-house to form an international division. Notice that the multidivisional structure gives the organization what is essentially a multidomestic orientation—that is, it acts like a firm operating domestically in several different national markets simultaneously.

When the activities of the firm can no longer be separated into domestic and international divisions, the international division is replaced by a multinational product or geographic M-form structure in which each division engages in the coordination of international activities. At this point, it becomes designated as a **multinational corporation**, or MNC. This shift typically occurs when international sales become the main source of organizational revenues and as suppliers, manufacturers, and distributors from a variety of countries form an interdependent inter-organizational network on a truly multinational scale. An MNC can achieve its multinational structure through internal growth, joint venturing, and mergers and/or acquisitions.

The MNC confronts the same drawbacks as do domestic M-form organizations, but the desire to be more efficient and flexible leads the MNC toward the global matrix structure depicted in Figure 4.5. A global matrix is served by managers of both geographic regions and of products or product groups. Local units are then organized to achieve (1) effectiveness in serving the particular region of the world to which the regional manager is assigned, and (2) efficiency in producing and supplying the mix of products for which the product manager is

responsible. Each of the local units acts as a fully operational company in its own right, and the array of the units that comprise the global matrix can be hybrids of any of the other designs described above.

Obviously, a major drawback of MNCs organized into global matrices are their often mind-boggling complexity, which demands attention to the now-three dimensions of operating this matrix: region, product, and function. Even with electronic communication and rapid transportation, the coordination problems these organizations face are costly in terms of management time and expertise, as well as other resources. The fragmentation and incoherence these organizations often experience confirms much about what postmodernists write, and explains growing interest in new organization forms that reduce the need for so much formal structuring and management control.

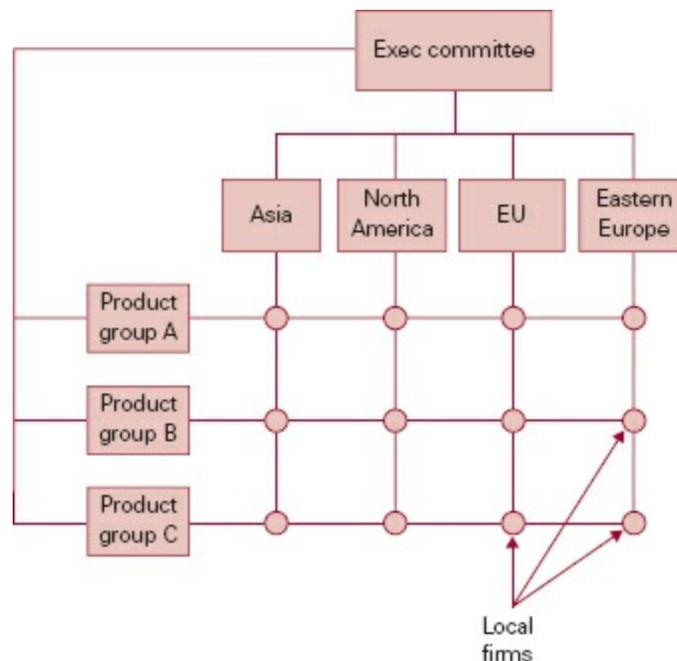


Figure 4.5 The global matrix.

New organizational forms

New organizational forms are most likely to appear in environments

characterized by rapid technological change, shortened product lifecycles, and fragmented, specialized markets. These are among the conditions postmodernists use to justify organizational changes they see as emerging in the so-called new economy, which rests on computer-based technologies ranging from the internet and social media to nano-technology, robotics, and 3D printing.

Network organizations

Benetton stands as an example of one of the first new organizational forms to be recognized by organization theorists—the **network organization**. Composed of hundreds of small clothing manufacturers and thousands of franchised sales outlets arrayed around a central distribution channel, the network is organized by a shared information system that allows its members to rapidly customize their production to the ever-changing demands of the international fashion market. In addition to providing a centralized distribution channel, Benetton provides member suppliers with technical manufacturing expertise, much of the necessary equipment, and sometimes capital, and handles marketing efforts on behalf of the network. Its supplier partners, who manufacture Benetton's clothing, were either spun off from the original Benetton operation or joined the network because their small size would otherwise have left them out of the international fashion market.

The German TV industry provides another example of a network-based new organizational form, this one taking the shape of a matrix of temporary project-based organizations.¹⁹ When a broadcaster commissions a TV program, producers in the network bring together independent writers, directors, camera people, actors, and other media specialists to collaborate on the project. The collaboration ends when the program is completed, at which point that piece of the networked organization dissolves, its members returning to the pool of potential human resources that other projects can draw into new collaborative projects. The temporary nature of relationships render the organizational structure of the German TV industry even more difficult to pin down than that of Benetton's, yet the two share the

advantages of networking.

Some of the advantages associated with network organizations make them particularly attractive to postmodernists: They encourage information sharing, liberate decision-making, inspire innovation, and encourage democratic management. By enhancing the spread of information and bringing together different logics and novel combinations of information, along with the freedom to try new things, networks provide conditions for creativity, innovation, experimentation, and learning to which other organizational forms can only aspire. Networks are capable of extremely rapid information exchange because they can process information in multiple directions simultaneously, and their ability to exchange knowledge quickly diffuses successful ideas throughout the network. And because vertical communication and control relationships are replaced with lateral relationships among network partners, this new organizational form tends to be more democratic.

The advantages just mentioned enable network partners to exploit opportunities before competitors realize they exist—an advantage with strong appeal to modernists, who tend to focus on the economic advantages of the network form of organizing. Modernists point out that network organizations act like a free-market system in which goods are bought and sold between network partners just as they would be on the open market. Competitive pressures on the supplying partners keep downward pressure on prices, while the use of market mechanisms to coordinate activities eliminates much of the need for the vertical hierarchy of traditional organizations, which reduces costs. Reduced administrative overhead and flexibility, along with the high levels of efficiency and profitability that make them highly competitive, are the chief economic benefits modernists claim for network organizations.

However, there is a down side to approaching network organizations as though their economic relationships are all that matter: It can lead to exploitation by network partners who are able to gain control of critical information or resources. For example, key suppliers can take advantage of dependencies in the larger system by charging higher prices once demand for their products is generated by the rest of the network. In these situations, one segment of the

network holds the rest hostage for higher profits. This potential for exploitation gives an advantage to networks built on friendship, reputation, shared ideology, trust, and cooperation.

Because the advantages networks enjoy depend upon members working voluntarily together to innovate, solve problems of mutual concern, and coordinate their activities, inter-organizational teamwork cannot be taken for granted. Therefore the webs of information exchange and mutual obligation that provide a foundation for healthy network relationships must be managed. Among the main management challenges are those of developing and maintaining an organizational identity and sense of purpose in the face of geographic and/or cultural diversity and loosely coupled interests and activities. Benetton's controversial 'United Colors of Benetton' international advertising campaign offers one example. This long-running ad campaign challenges viewers with images of human injustice and interracial and gay couples.²⁰ These ads focus Benetton's identity and give network partners a rallying point, both of which suggest the importance of branding for new organizational forms.

Supply chains and value chains

The **supply chain** model of organizing, shown in Figure 4.6, focuses attention on how material flows through a more or less linear chain of entities originating in the sourcing and procurement of raw materials (e.g. petroleum supplied by oil companies), followed by its transformation into outputs by those operating in the middle of the chain (e.g. oil refineries). Those sitting at the end of the supply chain distribute output (e.g. petroleum distributors) to customers (e.g. gasoline/petrol stations) and, ultimately, end users (e.g. the consumers of petroleum products, such as users of cars and lawn mowers). Benetton might seem like a supply chain organization, but since it operates as a single organization, it cannot technically be classified as one. Member organizations devote only a portion of their total activity to the supply chain. They engage in activities lying outside the purview of the supply chain (e.g. strategy, human resource management, IT, marketing) and may participate in more than one

supply chain.



Figure 4.6 The supply chain.

Organizations that participate in a supply chain may use models like the generic one shown in Figure 4.6 to help them agree on what is to be done by whom, and to track, monitor, and improve the transfers of resources, responsibility, money, and information critical to accomplishing the work of the entire chain as seamlessly and efficiently as possible. Dividing the required tasks among partners in the chain brings the advantages of division of labor without the costs of adding layers of management or bureaucracy. Transparency in the supply chain ensures that any remaining coordination costs are equitably distributed and reduces the attractions of shirking responsibility. Operating as a member of a supply chain means taking the whole chain into consideration when making decisions and taking action; often, this requires the use of shared information, monitoring, and control systems.

While supply chain thinking can be applied to both product and service delivery systems, it is most easily imagined as the linear production process. A related way of conceptualizing the same set of relationships that has more obvious applicability to services is the **value chain**. You may have heard the concept ‘value added’ used by managers. This term derives from a model introduced by American strategy Professor Michael Porter.²¹ Porter used the term ‘value chain’ rather than ‘supply chain’ to emphasize that each partner in their turn not only supplies input to the next link in the chain, but also is expected to add unique value to the output the end user receives. Defining the value their link provides becomes an obsession for those subject to Porter’s model because doing so justifies their existence within the chain. Among managers, value chain thinking has largely usurped the supply chain.

In a way, supply and value chains both represent a new form of organization. One thing that makes them stand out from previous organizational forms is that they arise in and from attending to the processes involved in product or service delivery. The emphasis on action in the supply chain model requires the dynamic thinking that the symbolic perspective encourages. Another distinguishing feature is that supply/value chains interpenetrate traditional organizational types, portions of which perform the supply chain's processes. In these ways, a supply/value chain positions itself between more traditional organizational forms, coexisting with them rather than offering a formal alternative.

Crowdsourced organizations

A **crowdsourced organization** is distinguished by its use of social media. The relationships on which it depends are primarily or entirely electronically mediated as opposed to being forged through face-to-face interaction, and thus it is sometimes called a virtual organization. For example, online retailers like eBay and Amazon let buyers and sellers negotiate economic exchanges through virtual contact via the internet. The online encyclopedia Wikipedia, another crowdsourced organization, is set up to enhance the exchange of knowledge. Wikipedia is created and maintained by user volunteers, who edit one another's entries and socialize new contributors to its culture and rules, all of which is accomplished online. Of course, virtual networks such as online dating services exist to create opportunities for people to meet nonvirtually, so you can find hybrids that blend virtual with traditional ways of structuring human relationships.

Other crowdsourced organizations reinvent employment for the digital age. For example, Amazon's Mechanical Turk organizes its 'micro-workers' by paying them meager sums of money to accomplish small work tasks online. Opportunities for more substantial employment are offered virtually by Uber and Lyft, crowdsourced organizations that provide transportation alternatives to traditional taxi services (see Box 4.3).

Box 4.3 Case example

Uber

You have seen that, at some point in the historical development of organizational forms, the postmodern image of fragmenting and fluid organizing replaces modernist images of planned and highly controlled organizations. The shift between old and new organizational forms often creates disruption in one or more of the institutions that organize human life. Uber provides an example.

Uber Technologies, Inc., a multinational online transportation network company headquartered in San Francisco, operates a smartphone app that allows customers to hail and pay a driver near their location to pick them up and deliver them to their destination.²² As an organization, Uber is structured by the logic of its IT platform rather than by the human relationships that occur within the system, such as those arising temporarily between riders and their drivers, or between the drivers and managers of Uber Technologies. For the most part, the managers operate at arm's length from drivers and riders, whose main channel of communication is through the app.

There is an imbalance of power between the owners of the Uber platform and their entrepreneurial employees and customers/clients, which has made Uber a target for criticism. Its riders have claimed prices are set too high, and drivers complain about not being reimbursed for the cost of using their own vehicles, not to mention the lack of employee benefits like healthcare. Some riders complain that Uber drivers are unprofessional; others claim they have been endangered; some, that they have been physically assaulted. These problems attract competitors such as Lyft, Curb, and Hailo, which use similar IT platforms, but offer different pricing strategies and/or select their drivers more carefully. Another level of resistance attacks the foundation of Uber and its crowdsourcing competitors. Taxi drivers are pressuring government regulators to force Uber and its lookalikes into institutional alignment with traditional transportation organizations, insisting that their drivers pay the same fees and be subject to the same rules and regulations they face.

Questions

All organizational forms, including newer ones like Uber, face institutional pressures. Suppose Uber succumbs to institutional pressures. What do you think institutionalization would change about Uber? How would an institutionalized Uber differ from traditional taxi services? Can Uber avoid institutionalization? If so, how? Should it want to? Why, or why not?

Airbnb, VRBO, and others have used a business model similar to Uber's to disrupt the hotel industry. Similarly disruptive businesses are being proposed for different industries, which suggests the 'uberfication' of society is well on its way. What characteristics would distinguish 'uberfied' society from the modern society it displaces? One possibility is the institutionalization of power imbalances between platform owners and their entrepreneurial employees and customers/clients. What other changes might 'uberfication' bring? You might frame your thinking using the sectors of Figure 3.4 presented in Chapter 3. Based on your analysis, do you think management and/or organization will be transformed or replaced in the future?

Theories of structural change

Comparing the forms that organizations adopt at different stages in their lifecycles shows that organizational structures change over time. This observation led some modernists to study how organizational structures evolve. Greiner's organizational lifecycle theory and Katz and Kahn's open systems model led modernist theorizing about how structures change. Inspired by the symbolic perspective, Anthony Giddens followed this urge by examining processes that explain how social structure can both maintain itself and change.

Organizational lifecycles

According to American organization theorist Larry Greiner, just as children pass through infancy, childhood, and adolescence to maturity, so organizations pass through entrepreneurial, collectivity, delegation, formalization, and collaboration phases (see Figure 4.7).²³ According to Greiner's **organizational lifecycle theory**, each phase is dominated by a different focus that leads to a crisis that threatens the organization's survival. If successfully met, the crisis brings about a revolutionary change that moves the organization into its next developmental phase.

In the **entrepreneurial phase**, an organization is focused on creating and selling its product. This phase usually takes place within a simple structure wherein every member of the organization is familiar with what the other members are doing. The entrepreneur can easily control most activities personally, and this personal contact makes it easy for other employees to sense what is expected of them and to receive direct feedback and close supervision. If successful (and be aware that the vast majority of organizations fail at this early stage), the entrepreneurial organization will find itself in need of professional management. Entrepreneurs are usually ideas people or technical experts rather than organizers, and further development often necessitates bringing in management skills from outside the organization, although sometimes professional management develops from within. In rare cases, the entrepreneur evolves along with the

needs of the organization, as did Bill Gates at Microsoft, Michael Dell of Dell Computers, and Apple's Steve Jobs.



Figure 4.7 Greiner's model of organizational lifecycles.

Source: Adapted and reprinted by permission of *Harvard Business Review*. From 'Evolution and revolution as organizations grow' by Larry Greiner, 50 (July–August) 1972. Copyright 1972 by the President and Fellows of Harvard College, all rights reserved.

It usually takes a crisis to convince an entrepreneur that professional management is required, since the early successes that allowed the organization to prosper give the impression that things are fine the way they are. However, growth brings with it specialization and horizontal differentiation, so that, sooner or later, the organization becomes too complex for a single individual to monitor all activities. This condition is exacerbated if the entrepreneur feels distaste for management activities, which is not uncommon among those who start their own businesses in order to avoid being controlled by others. According to Greiner, the result of early structural differentiation among organizational activities, coupled with top management's inadequate attention to integration, throws the organization into a **leadership crisis**, the successful resolution of which moves the organization into the next phase of its development.

By providing the organization with centralized decision-making and a renewed focus on its purpose, the organization's introduction of professional management usually overcomes the leadership crisis. The primary concern of the new managers is to manage the increased differentiation brought on by growth. This period is known as the

collectivity phase because of overriding concern with establishing a clear direction, which comes about as decisions are coordinated by the set of well-integrated decision-makers who form the new professional management team.

Even the most effective managers of a centralized social structure cannot keep pace with the decision-making required by an ever-more-complex organization structure. Sooner or later, centralization creates a bottleneck for action, and decisions must be pushed down the hierarchy if the organization is to continue functioning. Greiner called this the **autonomy crisis** because critical decision-making is missed at the level where action needs to occur. Managers often find it hard to relinquish centralized control, and their hesitation to allow autonomy at lower levels of the organization eventually provokes this crisis as actors await decisions yet to be made at higher levels.

The **delegation phase** solves the autonomy crisis, but the added growth it allows brings more demands for coordination and integration that cannot be met by the structure that emerged in this phase of the lifecycle. Too much decentralization leads to control loss, and thus the **crisis of control** follows. As the organization does not wish to return to centralized control and its bottlenecks, it looks for a new solution in the creation of formal rules and procedures that will ensure that decentralized decisions are made in the way that management would make them if they had the capacity to do so. At this point, bureaucracy appears.

In the **formalization phase** that resolves the crisis of control, the organization continues to grow and differentiate, adding ever-more-formal control mechanisms to integrate the increasingly diverse set of activities. Mechanisms of control include planning, accounting and information systems, and formal review procedures. Control through these formalized and bureaucratic means eventually goes too far, ending in a **crisis of red tape**.

The crisis of red tape is what gives bureaucracy a bad name. Bureaucracy is not the real villain, according to Greiner; instead, managers overindulge in bureaucratic control mechanisms. Their attempts to apply formal rules and procedures in a universal and impersonal manner create an organizational environment that

becomes not only ineffective, but increasingly distasteful to workers. The situation worsens when management's first response to the breakdown of bureaucratic controls is to implement more bureaucracy. The problem reaches crisis proportions either when employees cannot work out how to make the system of rules and procedures work, or when they rebel against it.

Proceeding to the **collaboration phase** pulls the organization out of its red-tape crisis. During this phase, teamwork redistributes the now overdifferentiated tasks into more recognizable chunks and assigns shared responsibility for them to groups of individuals in ways that render work once again comprehensible. What was too complex or uncertain to be effectively managed by formalized rules and procedures can be reorganized into smaller self-managed units that are granted decentralized decision-making authority. This brings about a significant change in organizational structure, as well as in management ideology.

Trust is a big issue for managers to address if the collaboration phase is to take hold and endure, and so the skills and leadership styles demanded of managers changes considerably. Instead of the former emphasis on control, top managers must shift their focus to inspiring motivation, often accomplished by relating organizational goals and purposes to employees' sense of the organization's identity and its links to its heritage. However, if, at some point, management fails to allow for necessary change, the organization will undergo a **crisis of renewal** marked by what in humans would be described as lethargy. The primary symptom of this crisis is employees and managers who suffer from burnout and other forms of psychological fatigue, which are likely due to the strains associated with temporary assignments, dual authority, and continuous experimentation. According to Greiner, the crisis of renewal will either lead to a new form of organization or to organizational **decline** and eventual death.

The organizational lifecycle theory describes organizations as changing through a series of evolutions and revolutions. Every evolutionary phase contains the seeds of crisis, with each crisis either pushing the organization forward or leading to its demise. Evolution occurs, according to Greiner's theory, because the organizational arrangements and management strategies that are adaptive for one

phase of the lifecycle become maladaptive at the next. His conclusion is that structural arrangements and leadership styles must constantly evolve throughout the life of the organization. But Greiner's theory did little to explain the environmental determinants of structural change in organizations. Daniel Katz and Robert Kahn took up this challenge.

Organizational structures as open systems

Katz and Kahn's open systems model applies insights from general system theory to organizations. Be sure to notice that this model examines organizations from the open systems level of the systems hierarchy, even though they exist at all levels up to and including the level of social organization. Theorizing them as open systems means that the model does not embrace the full complexity of organizations, but what is lost in complexity gains from insight into the evolution of organizational structures and their relationship to the supersystem, the organizational environment. According to Katz and Kahn, from simple beginnings the organizational system evolves in response to internal (subsystem) and external (supersystem) pressures, all the while attempting to buffer its technical core so that there is no disruption to the core transformation process that sustains the organization.²⁴ Over the course of its elaboration, the organization's social structure passes through the phases depicted in Figure 4.8.

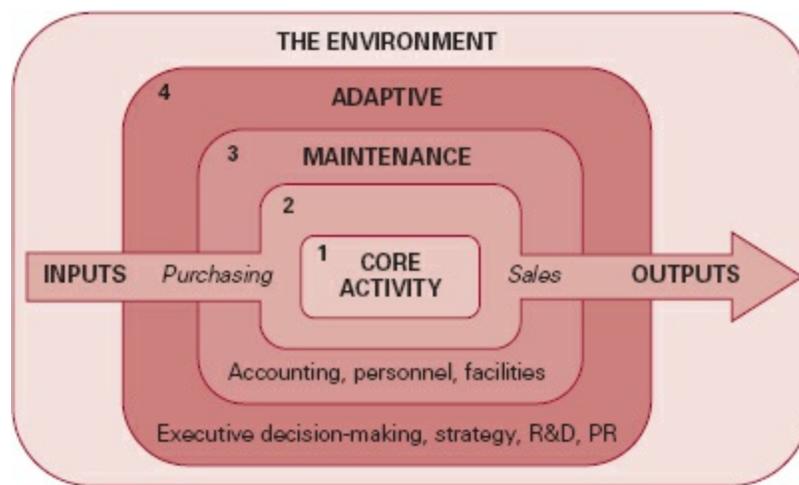


Figure 4.8 Katz and Kahn's open systems model, showing how an organizational structure develops from a primitive to a fully elaborated form.

Source: Based on Katz and Kahn (1966).

The first phase of structural development involves the differentiation of purchasing and sales activities from core production tasks. Separation into these formal departmentalized units allows production or service employees to focus their attention and energy on transforming raw materials into products or providing services to clients, while the support functions procure needed inputs and sell and distribute outputs to customers and clients. This **support phase** creates pressures to integrate to make sure that any lack of raw materials or other inputs will not interrupt transformation processes, to ensure that inventory is turned over, to achieve optimal use of the labor force and other assets, and to continuously generate revenue. Integration at this stage is typically provided by a general manager, whose job it is to oversee purchasing orders and production schedules, to plan production levels based on sales projections, and to manage sales and distribution activities.

If the organization continues to survive and grow, it will find it necessary to supplement core production and support activities with HR, accounting, facilities management, and public relations. Employees quit, and others must be recruited and trained, bookkeeping tasks expand to include corporate tax considerations and financial planning, physical facilities require regular upkeep and modification, and the local community and media may begin making inquiries and demands. Katz and Kahn referred to differentiation to accommodate these activities within the organizational structure as its **maintenance phase**. Because maintenance activities are not highly interdependent with those of purchasing, production, sales, and distribution, they can be carried out with considerable independence of support and technical core activities. This additional differentiation, however, creates the need for greater integration. The increased integration is typically provided by the addition of middle managers to what then becomes a full-blown hierarchy, on top of which sits a CEO who oversees the now much more complex organization.

The organization that continues to grow does so by adding to its capacity to respond to environmental changes, pushing it into the **adaptation phase**. The development of new product or service offerings, new markets for existing offerings, or activities aimed at managing the organization's future profitability or its goodwill, corporate brand, and reputation all demand more differentiation via the addition of strategic planning, economic forecasting, corporate equity, market research, R&D, tax planning, legal advising, and lobbying functions. According to Katz and Kahn, the addition of adaptive functions marks the culmination of the organization's structural evolution at the point at which it fully integrates these activities into its structure, which is most often done through the creation and training of a high-functioning executive team.

Structuration theory

While the models presented by Greiner and by Katz and Kahn explain how an organizational **structure** evolves over time and what changes to organizational structure evolution demands, the symbolic perspective focuses attention on what processes structural change involves. Symbolic theorists pointed out that the seeming stability of social structure is underpinned by numerous interactions that maintain it, but sometimes also transform it. They claimed that what seems like a stable social structure is the product of dynamic relationships among humans and the meanings in which they traffic. In this sense, social structures are metaphorically comparable to material objects, which are composed of dynamically circulating molecules and atoms.

The idea that social structures are dynamic arose from a perennial debate among sociologists concerning the relationship between human **agency** and the structure of society that gives agency its shape and meaning. Advocates for the primacy of structure believe that structures shape the behavior of actors, while advocates for agency claim that social structure arises in and from the interaction of actors. Proposed by British sociologist Antony Giddens in 1984, **structuration theory** offered to reconcile the two sides.²⁵

The duality of structure and agency

Giddens began with the premise that structure and agency form a **duality** in the sense that while structure enables and constrains action, action constitutes structure. On the structure side of the duality, agents are enabled to the extent that social structure supports their activity and constrained whenever it does not. On the agency side, actions constrained and enabled by structure become routinized, thereby producing stable patterns of activity guided by rules concerning the use of society's various resources. Giddens referred to the mutual processes through which structure influences agency and agency influences structure as **structuration**.

Giddens urged us to think about structuration as taking place across space and time. A structuration process taking place in one location can spread to and combine with those taking place elsewhere, and structuration occurring at one point in time influences that which follows at later points in time. Steven Barley and Pamela Tolbert visualized the spatial-temporal ordering of structuration as indicated in Figure 4.9.²⁶ However, while this figure implies that the actions of agents in one time and place produce the structures of the next time and in other places, Barley and Tolbert's model does not fully embrace the mutuality Giddens claimed for structuration when he proposed that structuration is instantiated.

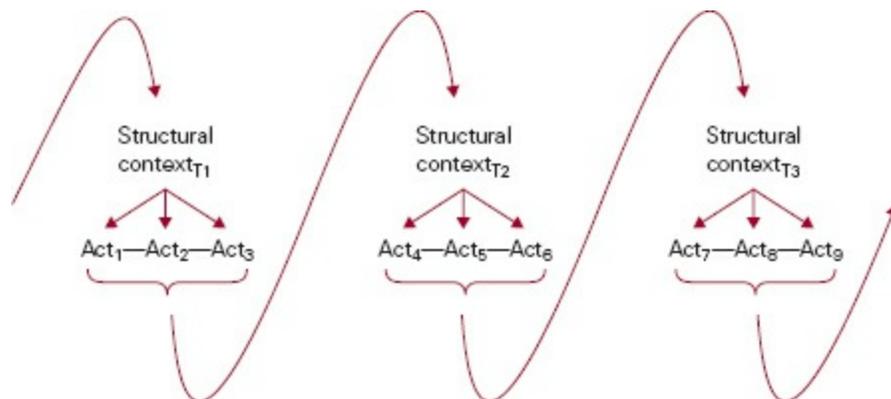


Figure 4.9 The duality of structure and agency, as proposed by Giddens in his structuration theory.

Source: Based on Barley and Tolbert (1997).

Instantiation and modalities

The concept of **instantiation** implies that structuration occurs everywhere at every instant, and thus something is constantly occurring in the relationship between structure and agency. This insight led Giddens to theorize structuration as taking concrete form within three different **modalities**, each defined in terms of the rules and resources that organize and are organized by observable **social practices**. The modalities he identified are interpretive schemes, facility, and norms. Table 4.3 presents his theory concerning how the modalities intervene between different dimensions of structure and agency.

Giddens' structuration theory proposes that interpretive schemes align structures of signification with the communication practices of agents, that the facility agents have to act aligns power relations with domination structures, and that norms align legitimation structures with the ways agents sanction one another's behavior. In a nutshell, Giddens' theory states that accepted and routinized social practices, born of the duality of structure and agency, constitute society in the actions of its members. Therefore neither structure nor agency alone can explain the social order experienced by its agents; instead, what needs to be understood is how structure and agency work on and with each other always and everywhere to reproduce the social order.

Table 4.3 Social practices for using rules and resources sit at the intersection of structure and agency

Structure	Signification	Domination	Legitimation
Modality	Interpretive schemes	Facility	Norms
Agency	Communication	Power	Sanction

Source: Anthony Giddens (1984) *The Constitution of Society*. Berkeley: University of California Press.

Structuration

While the earlier theories of Greiner and of Katz and Kahn presented snapshots of how structure appears at sequential stages in a developmental or evolutionary chain in which change was implicit, by focusing on the action of *structuring* Giddens made change the explicit focus of his theorizing. Making *structuring* his focus allowed Giddens' to describe social practices that structure action and give it meaning, thereby enabling and constraining the actions through which structure is either maintained or changed. Moreover, because structuration can happen with or without the awareness of its agents, Giddens' theory describes the unseen social forces always and everywhere at work in the constitution of society. Structuration theory promises better understanding of our active role in constituting the social order that enables and constrains us; in forcing recognition of our complicity, the theory adheres to the emancipatory purposes set forth by postmodern theory (see Box 4.4).

Box 4.4 Think like a theorist

What does structuration look like?

You confront the duality of structure and agency every day. For example, all humans construct systems to manage themselves (e.g. legal systems, bureaucracies) and then tell themselves they cannot act in certain ways because the system does not allow it. Our failure to recognize our complicity in constructing the systems that control us prevents us from realizing that the system can be changed using the same creative forces that produced it in the first place. We thus imprison ourselves in our habits, routines, and expectations, all of which are supported by the powerful, who use their influence to maintain the status quo that keeps them in power. All the while, minute changes within the ever-present dynamics that produce and reproduce society keep social structures from ever attaining more than the appearance of solidity. Accordingly, even the most stable social structure is defined by cooperative actions that agents always and everywhere have the capacity to change. Figure 4.10 is one way of representing the mutual forces for stability and change that are always at work everywhere, whether you are viewing a society or an organization.

Exercise

Apply the idea that social structure is sustained by the cooperative actions of its agents to plan a change you would like to see in society or in your organization. Which agents will you target? What cooperative actions might you disrupt to bring about change, and how will you disrupt them? What resistance can you anticipate, and how will you respond? What does this analysis teach you about structuration?

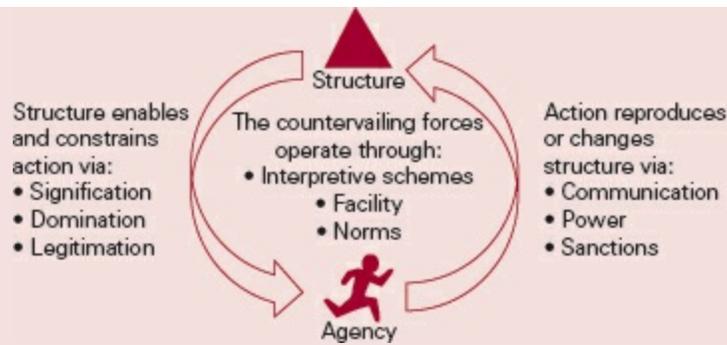


Figure 4.10 A visualization of structuration. As structure both enables and constrains action, actions constitute structure.

Structuration in time

American sociologists Mustafa Emirbayer and Ann Mische extended Giddens' theory by explaining how past, present, and future operate on and within structuration via iteration, practical evaluation, and projection.²⁷ In the iterative process, agents acting in the present reactivate past patterns of behavior as routines, thereby reproducing prior structures. By engaging in practical evaluation, agents make informed judgments that influence their actions, thereby either reproducing or changing existing structures. And through projection, the possibilities of the future signal creative options that allow the reconfiguration of existing structures to be intentional and sometimes even planned. Emirbayer and Mische combine these three processes to explain the observation that structures both reproduce themselves and change.

Be sure to notice that Emirbayer and Mische, like Torbert and Barley, struggled to fully embrace instantiation, the notion that the abstract dualism of structure and agency becomes concretized at every instant everywhere. Tackling instantiation gives rise to paradoxes created by defining duality recursively, for example in propositions such as 'structure shapes and is shaped by agency,' and in the assertion that structuration occurs 'always and everywhere.' The seeming paradoxes of structuration theory arise partly from the linearity of the English language, which is not well suited to describing

the reciprocal influences embraced by structuration theory. Another challenge lies in the propensity of modernists to mistake interpretive description for positivist explanation. While structuration theory provides insight into *why* people and societies behave as they do, prediction of the outcomes of structuration is neither possible nor its purpose. Instead, among the theory's main contributions has been turning attention to the social practices and activities that constitute organizing and thereby reveal its processes in real time (see Box 4.5).

Box 4.5 Exercise those perspectives

Critiquing structuration theory

Structuration theory has been accused of mixing levels of analysis and ignoring important differences between perspectives. First notice that, within the modernist perspective, agency is an individual-level phenomenon, while structure appears at the level of social system, which includes organizations. Then consider how Giddens used the symbolic perspective to explain the duality set up by modernist ways of thinking about structure and agency, including the assumption that they occur at different levels of analysis.

Giddens' modalities, which describe the instantiation of structuration processes at particular junctures of space and time, conjoin agency and structure and thereby overcome, or at least sidestep, the riddle that their duality poses. In this way, advocates of structuration theory counter modernist critiques by claiming that mixing levels and perspectives freed Giddens from dualism, and thereby led to a new and valuable way of understanding social reproduction and its role in the constitution of society. But notice the change in focus: The phenomenon of interest is no longer social structure, but is now the *social reproduction of social structure*, or structuration.

Exercise

Take another look at the different perspectives and the levels of analysis introduced in Chapter 2. Where do you stand: Are you friendly to or critical of mixing perspectives? Do you think that ignoring levels of analysis presents a problem or offers new possibilities? Defend your position, and then consider how someone opposing you might argue. These are matters of deep division among organization theorists and other social scientists, and you may, like many of them, feel a strong urge to resist one position and embrace the other. Experience what it feels like to grapple with these divisions and what trying to produce a resolution requires. Does this help you to understand and appreciate organization theorists and the work they do?

The symbolic perspective: the social practices of organizational structuring

Structuration theory turned attention from social structures to structuring as practice and process. Other symbolic theorists took Giddens' ideas in several directions. First and foremost was French sociologist Pierre Bourdieu's theory of practice. In combination with structuration theory, the theory of practice inspired the study of organizing practices, exemplified in what follows by routines and improvisation.

Practice theory

Pierre Bourdieu's theory of practice turned attention from Giddens' proposition that agency is enabled and constrained by social structure to how everyday practices are shaped by the positions humans occupy in their various fields of endeavor, for example business, medicine, education, art, or organization theory.²⁸ According to Bourdieu, a **practice** is any set of repeatable actions informed by the knowledge shared among those situated in a field. However, as can be seen in the fields of sport and in performance arts like music and theater, 'practice' carries the added meaning of actively exercising a skill for the sake of acquiring or maintaining first competence, and then expertise and mastery.

Central tenets of Bourdieu's theory are that practice is embodied and that all practices, including those of organizing, require embodied learning. For example, mastering the skill needed to play music requires practicing to the point at which the knowledge of how to play a musical instrument becomes absorbed into the body. The same need for embodiment applies to learning to throw a pitch in cricket or baseball, or to kick a football. One proposition Bourdieu derived from **embodiment** was that sensory awareness and tacit understanding lie beneath rational ideology. According to Bourdieu, actors do not continuously calculate according to explicit rational or economic criteria as modernists often assume; instead, they operate according

to a tacit practical logic and to bodily dispositions that shape and are shaped by their context. Bourdieu believed that embodied tacit understandings operate in and through fields structured by negotiable forms of capital.

Field and capital

According to Bourdieu, a **field** is a structure with an internal logic that establishes hierarchical relationships on the basis of the distribution of particular forms of capital. Bourdieu claimed that every field is structured by its dependence on a specifiable form of **capital**: The cultural field is structured by cultural capital (celebrity, media attention); the social field, by social capital (networks of trust and cooperation); the academic field, by academic capital (scholarly reputation and honors); the economic field, by economic capital (wealth)—and so forth.

Consider **cultural capital**, which Bourdieu described as embodied in styles of speech, gesture, dress, and physical appearance, as well as in the possession of valued abilities like playing music, literary writing, dramatic acting, or producing visual works of art. For example, in the cultural field, you will find in the production and consumption of literary works signifying practices like writing and interpreting texts that establish social distinctions. These distinctions legitimate agents in their roles as authors, critics, publishers, and readers, and communicate their status within the cultural field, thereby constituting a hierarchy. In much the same way, wealth constitutes hierarchy in the field of business and academic achievement in the field of education.

While the rules of a field interact with each individual's stock of capital (e.g. social, cultural, economic) to define the hierarchy of positions in that field, each field interacts with other fields. Bourdieu believed that interaction between fields reflects the relations of class and power within a society and that these social distinctions determine which individuals have enough power to influence their own field or those of others. However, once individuals establish themselves as dominant, they are unlikely to desire change, preferring instead to reinforce and reproduce the conditions upholding their social position.

In this sense, while Bourdieu presented fields as imminently transformable, he also showed why change is more likely to be incremental than revolutionary.

Habitus

Bourdieu drew on ideas presented by French sociologist and anthropologist Marcel Mauss, who claimed that bodily actions like eating and walking display aspects of the culture in which they are learned such that culturally shaped habits reflect the culture that upholds them.²⁹ Following Mauss, Bourdieu defined a **habitus** as the site where the internalization of the social order into the body occurs, which becomes visible in the practices in which bodies engage as they respond to their field. Bourdieu theorized that the habitus permeates the field in much the same way as culture permeates the body as it forms dispositions to think and act in certain ways that can be observed as learned habits and motor skills (e.g. riding a bicycle, swimming, playing a musical instrument), style (e.g. conservative, radical, artistic), and taste. The habitus gives members tacit understanding of how the field operates and allows them to know how they and others should behave, given their relative power position and the amount and kind of field-relevant capital they control.

Bourdieu made two important points about field and habitus that align with the conclusions that Giddens drew from structuration theory. First, because the internal workings of a field are often hidden from view, the habitus can be well protected from outsiders. Second, because the habitus operates without need of awareness, insiders can reproduce the field and its hierarchies while remaining oblivious to their own involvement.

Routines as organizing practices

In the first years of its alliance with Renault, Nissan senior assembly-line workers and engineers wrote standard operating procedures (SOPs) to help transfer knowledge about effective work practices to their alliance partner. For example, Nissan gave Renault's dashboard

assembly-line workers directions that included hand-drawn sketches showing the exact order in which dashboard wires were to be connected, what tools to use, and how to reach the wires.³⁰ Thus routines developed at Renault were guided by knowledge communicated through standardized rules and procedures developed by Nissan. The Nissan–Renault example is but one of many indicating that routines can be learned and that they offer great value to organizations, including enhancing productivity and stability through the consistent performance of work.³¹

Every organization depends to some extent on **routines**, from techniques associated with the use of production tools and factory equipment, to the hiring and firing of employees, strategic planning cycles, annual performance evaluations, quarterly reporting, and budget reviews. These and many other routines preserve organizational knowledge and transfer capabilities so that work can be successfully accomplished and coordinated in an uninterrupted stream through time.³² The link to knowledge, as underscored by the Nissan–Renault example, led modernist organization theorists to compare organizational routines to habits, computer programs, and genetic codes like DNA, and led practitioners into the field of knowledge management.³³

American organization theorist Martha Feldman argued that routines offer stability, but also contain the seeds of change. By defining routines as practices, she proposed they be seen as flows of connected ideas, actions, and outcomes that emerge as organizational members try to understand what to do in particular contexts when facing specific situations.³⁴ For example, police officers dealing with an incident of domestic violence know the expected routine for dealing with the situation because they have been trained in policing procedures, but they may also have developed their own way of dealing with these situations based on experience. In the moment of confronting a domestic scene involving violence or its potential, the officers can combine experience and formalized police procedure to deal with the circumstances of that particular occasion. It is unlikely, then, that the officers approach their confrontations with domestic violence in identical ways each time.

Feldman observed that differences in how routines are enacted introduce changes that subsequently affect the routine. In the dynamic light of structuration theory, she and colleague Brian Pentland concluded that routines do not just stabilize organizational activities and performance; they are always and everywhere open to adjustments that subject their organizations to change.³⁵ They argue that changes in routines can spread within and across organizations, or alternatively a routine may disappear through lack of use—in other words, routine represents a dynamic state, rather than a stable structure.

In a study of a university's residence halls, Feldman reported finding that the routines she observed—budgeting, hiring, training staff, opening residence halls at the beginning of the academic year and after holidays, and closing them at the end of the academic year—changed substantially over the course of her four-year study. For example, at the outset of her study, applicants for residence hall employment were required to submit an application to every residence hall for which they wanted to work, but later a centralized submission process was implemented such that only one application was required even though applicants might be considered and interviewed by staff from multiple residence halls, and each received at most only one offer of employment. Moreover, Feldman noted that none of the routines she observed in practice was ever performed in exactly the same way twice.

Feldman and Pentland concluded that routines contribute to making social systems flexible and dynamic because any alteration of a practice-in-action feeds back on the interpretation of the rules governing it and thereby on future enactments of the practice. In their review of practice theory as it applies to organizations, Feldman and American organizational theorist Wanda Orlikowski pointed out:

The notion of mutual constitution implies that social orders (structures, institutions, routines, etc.) cannot be conceived without understanding the role of agency in producing them, and similarly, agency cannot be understood “simply” as human action, but rather must be understood as always already configured by structural conditions.³⁶

Organizational improvisation

Jazz great Charles Mingus famously said: ‘You can improvise on anything, but you can’t improvise on nothing.’³⁷ If **improvisation** requires something to improvise on, then routines offer many possibilities for **organizational improvisation**, a concept introduced by Karl Weick.³⁸ Although routines may reinforce established interaction patterns and reproduce and stabilize social structures, organizational members often behave like jazz musicians who refuse to play what has been played before. By playing outside established structures, jazz musicians produce new musical forms.

While writing about how the structuring of jazz performance applies to organizations, I argued that social structures always have coordination gaps due to the impossibility of fully structuring all organizational activities.³⁹ To minimize the problems created by these ‘empty spaces of organizing,’ I suggested that organizational members adopt techniques used by jazz musicians. For example, jazz tunes are performed in successive waves of improvisation that begin by playing the head of the selected tune in a recognizable and often routine way (e.g. think of the first chorus of ‘I’ve Got Rhythm’). The head provides the musicians with a basic structure consisting of a melody, harmony, and rhythm, which they use as a departure point for their improvising.

As the performance of a jazz tune unfolds, each soloing musician attempts in turn to lead the band away from both the originating and emerging structures by playing in their empty spaces. Improvising then occurs as musicians play in the rhythmic spaces between beats played before, by introducing a new harmony, and/or by redirecting the melody outside its expected musical path. As they take turns soloing, different musicians improvise differently such that each successive musician can build on improvisations introduced by the others until, collectively, a unique playing of the tune is achieved. The structure provided by the head can be discerned—if only in absentia—throughout the playing of a tune. The relationship between the starting structure and its culmination is reinforced when, at the conclusion of the tune, the musicians replay the head, embellishing it with the best ideas their improvising produced. In this way, a structure and its empty spaces are combined in performance in a way that reveals how

structure is intertwined with agency, whether the agency is that of improvising jazz musicians or members of an organization.

As the example of jazz performance shows, improvising alters the very structure that provides its departure point, and, in this way, organizational improvisation appears to be a structuration process. Like variations on a routine, improvisations may disappear once they have served their immediate purpose, or they may be incorporated into old interaction patterns, or may establish new ones. The paradox at work here is that an institutionalized improvisation turns into a routine just as agency begets structure in structuration theory. Agency changes structure when organizational improvisation allows an organization to spontaneously adapt to environmental change, for example by reacting creatively to a threat or taking advantage of an opportunity in a timely manner.⁴⁰ Novelty and innovation, as well as flexibility and speed of adaptation, have been found to be other advantages of organizational improvisation, but research findings also show it can lead to control loss and lack of coordination between improvising teams.⁴¹

Postmodern deconstructions of organizational structure

Postmodernists tend to be suspicious of claims about structure and are skeptical even of those who assume it operates in ways that are hidden from view, as do structuration and practice theorists. Instead, postmodernists believe that it is the illusory existence of structure and concepts such as hierarchy and authority that exercises control and allows those to whom knowledge/power is attributed to maintain dominance over others. To expose the illusory foundations of domination, postmodernists deconstruct concepts and management practices to reveal how they perpetuate belief in the need for rational order and control that privileges some, while exploiting and/or marginalizing others.

In an influential series of articles, British organization theorists

Robert Cooper and Gibson Burrell interpreted modernist organization theory as an expression of the drive to create order out of disorder.⁴² They associated the term 'formal' with unity, routine, and rationality, claiming that these associations define a moral code built upon the intention to suppress disorder. Acceptance of this moral code is predicated on the fear that arises when the devalued term 'disorganization' (associated with the chaos of the informal, local, spontaneous, and irrational) is presented as a threat to the privileged term 'organization.' Suppression of disorganization hides any phenomenon or person associated with it behind a wall of silence and repression.

Many deconstructionists do not specify alternatives to the constructions they decry—they believe doing so would only impose a different Grand Narrative. Nonetheless, some suggest that by deconstructing taken-for-granted ideologies and practices, space for new organizing possibilities opens. Notice how close this idea comes to the empty spaces of organizing pointed out by symbolic theorists interested in organizational improvisation. Postmodernists introduce into these spaces of possibility concepts that include de-differentiation, feminist organization, and anti-administration theory. Following discussion of these ideas, a more radical deconstructive possibility will be considered: the idea of hacking institutionalized structures.

De-differentiation

You will recall that modernist organization theorists Lawrence and Lorsch defined organizational differentiation as the division of labor into specialized units overseen at multiple hierarchical levels. Research showed that horizontal differentiation produces a need for integration, which calls forth vertical differentiation, introducing the need for more integration and so on, which, over time, transforms organizational structures from simple to complex forms. In opposition to this idea, postmodernists suggest de-differentiation, which they distinguish from integration.⁴³ Where integration implies the coordination of differentiated activities, **de-differentiation** reverses the very conditions that created the need for integration in the first place.

In de-differentiation, organizations integrate activities not through hierarchical or structural elaboration, but by allowing people to self-manage and coordinate their own activities. De-differentiation satisfies the emancipatory interests of critical postmodernists by undermining the controlling mindset of modernist thinking.

British sociologist Scott Lash claimed de-differentiation marks the defining moment of postmodernism in that it reverses the modernist progression of ever-greater specialization and separation in the social order.⁴⁴ Borrowing Lash's idea, Australian organization theorist Stewart Clegg accused today's overdifferentiated organizations of causing their members to experience incoherence, thereby creating dependence on elite members of the hierarchy to tell them what to do and provide meaning to their work. The self-organizing or semi-autonomous team concept from socio-technical systems theory offers a modernist example of de-differentiation. Workgroups organized as semi-autonomous teams are given responsibility for a broadly defined set of tasks; they schedule their own time and monitor, assess, and correct their performance, including quality. For example, in Volvo's Kalmar Plant in Sweden, entire automobiles were assembled start to finish by teams of self-managing workers. Examples like Kalmar's suggest that integration can be achieved independently of hierarchy.

De-differentiation makes it easier to imagine democratic organizations in which integration and coordination are the responsibility of everyone and not just management's concern. This is the idea behind community-owned firms such as the Green Bay Packers football team in the United States and Spain's Barcelona football club, behind cooperatives such as Mondragón in Spain, and employee-owned firms such as the John Lewis Partnership, which owns and operates department stores in the United Kingdom. You will find many more laborist (vs. capitalist) organizations participating in the cooperative (coop) movement, which has produced a variety of autonomous associations organized to provide, for example, food, childcare, housing, and credit. However, some postmodernists warn that these types of organization will turn out to be just another servant of managerial interests, one that projects an image of democracy, autonomy, and self-management, but which image merely disguises the power struggle by dressing it in new clothes.

Anti-administration theory

David Farmer, an American philosopher and economist, offered a radical proposal for the field of public administration. Much as particle physicists have shown that antimatter and matter annihilate each other when they collide, Farmer proposed that confronting administration with anti-administration would lead to significant changes in society.⁴⁵

Farmer believed that government bureaucracies serve their political masters and enforce justice by privileging hierarchy, efficiency, and technical expertise. He claimed that **anti-administration** would collide with administration by invoking radical skepticism toward its ends, its means, and the hierarchical rationality it employs. Practicing anti-administration means reflecting on what is absent from administrative policies, procedures, and actions, and especially on the consequences of administrative action for those ignored or silenced by administrative policies.

One example of the practice of anti-administration theory can be found in the field of criminal justice in the United States, where those involved with the Black Lives Matter movement confront the concept of justice with that of injustice. While activists in this movement demand the removal of injustice from the criminal justice system, those resisting their demands rely on the administrative logic of the administrative hierarchy and on the efficiency and technical expertise of the police. Black Lives Matter campaigners point out that most police forces across the United States are currently structured in ways that support white privilege. The awareness and activism the Black Lives Matter movement generates is but one source of growing concern about racial and other forms of injustice. The feminist and LGBTQ movements, which Black Lives Matter advocates support and with which they cooperate, offer other examples where confronting administrative notions of justice with the anti-administrative focus on injustice is making social change possible. Other examples can be found in organizations that confront male-gendered and typically white-male-dominated organizing practices with feminist principles.⁴⁶

Feminist bureaucracy

In contrast to male-gendered organizations, feminist organizations evidence equitable and flexible structures, participatory decision-making, cooperative action, and communal ideals. They can be found in women's health centers and domestic violence and homeless shelters where men and women, people of color or of different ethnicities, the young and old experience greater equality than do members of traditional (modernist) bureaucracies.

Feminist theorists propose that the modernist theory of bureaucracy privileges and justifies hierarchy by claiming that power and position are based on the objectively rational criteria of technical competence. They point out that terms such as 'objective,' 'rational,' and 'competence,' when defined within a white-male-centric discourse, lead to domination of women, as well as people of color and many minorities. In the discourse of a male-dominated management practice, individual performance is generally evaluated against criteria such as decisiveness and the possession of leadership qualities that become gendered when their definitions favor white males. Describing a woman as aggressive, for example, is code for male evaluators to dismiss her leadership qualities, whereas this term holds positive connotations for male candidates. Openly confronting such practices with feminist alternatives undermines and replaces them.

Karen Lee Ashcraft's definition of the **feminist bureaucracy** keeps the seemingly incompatible elements of both bureaucratic and feminist characteristics in play within work practices.⁴⁷ In this form of organization, informal tasks are recognized (e.g. comforting someone who is emotionally distraught), and hierarchy and centralization are constantly challenged by egalitarian and decentralized practices. Ashcraft's research in a nonprofit organization concerned with domestic violence studied the interplay of bureaucratic elements (a hierarchical organization chart) with feminist ideals of ethical communication (the right to express views and emotions, and to be heard). This hybrid employed the tensions between its contradictory elements to help it cope with paradoxical pressures. For example, the organization needed to display many of the features of a bureaucracy in order to secure external funding, but it also needed to stay small,

flexible, and responsive to individual clients in order to achieve its goal of serving abused women.

Hacktivism: organization by design(ers)

Because designers are trained to make use of empathy and aesthetic imagination, some believe that designers approach organizational design tasks in ways that differ from classical organization development practices. Of course, the fields of design stretch across many disciplines, ranging from product and service to architecture, fashion, and web design. Application of the design disciplines to organizations is just getting under way, but, to offer you a tantalizing example, consider how Swedish fashion designer Otto Von Busch introduced new-economy freedoms to old-economy organizations in the fashion industry.⁴⁸

Von Busch based his design practice, in part, on the work of French philosophers Gilles Deleuze and Pierre-Félix Guattari, who developed the postmodern concept of **lines of flight**.⁴⁹ The concept describes escape routes that penetrate any bureaucracy or hierarchy (see Figure 4.11). These theorists claimed not to be talking about random responses to exogenous shocks, like a flock of birds startled into flight by a gunshot; instead, they used the term to describe ever-present opportunities found within all repressive social structures. They argued that lines of flight allow organizational members the opportunity to escape and/or undermine the repression of thinking imposed by a discipline, an organization, a field, or a discourse. Deleuze and Guattari compared lines of flight to music that ruptures expected patterns or to plants that propagate rhizomatically.

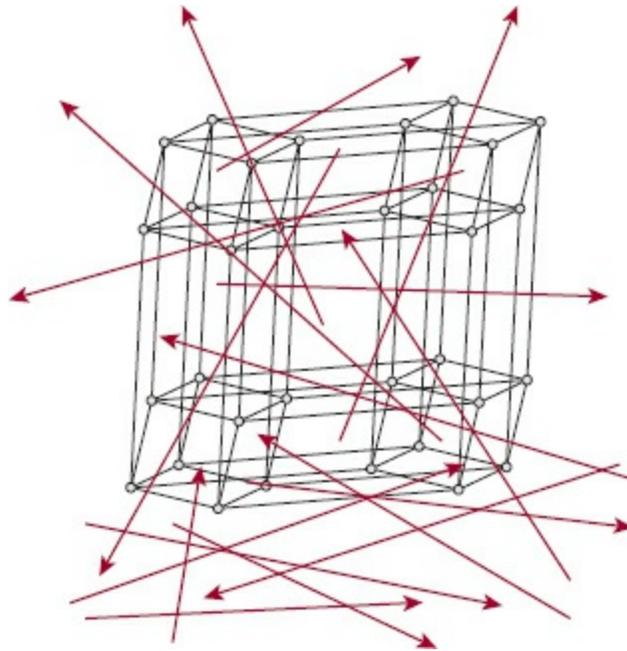


Figure 4.11 Lines of flight.

Note: The grid in the background of this figure represents Deleuze and Guattari's notion of the state apparatus from which the lines of flight depicted by the arrows represent escape routes.
Source: Adapted from 'A 5-cube' by Joseph Malkevitch. Reproduced with kind permission.

Von Busch used lines of flight to theorize the mindset required for hacking the fashion industry in ways that allow ordinary people to be fashionable like the wealthy segment to which the industry caters. He borrowed the concept from the computer field, which distinguishes 'cracking'—opening a computer program in order to harm or destroy it—from 'hacking,' which builds on existing computer code to get it to do new things. Extending the concept of hacking through the use of technology to hacking using design skills, Von Busch studied 'fashionable' activities—that is, those intended to play with fashion in order to change how the industry operates and to help people transform their wardrobes into creative things of beauty in the process. He referred to the ideology behind using the generic concept of hacking as **hacktivism**.

One example of hacktivism offered by Von Busch involved hacking the Gucci brand in order to produce 'Gucci-fied' fashion, as designer Stephanie Syjuco illustrated with her Counterfeit Crochet Project.⁵⁰ This project offered instructions for counterfeiting a Gucci design by

first enlarging a photocopy of a handbag until it created a low-resolution, pixilated image that could be used as a crochet pattern. The playful variants on Gucci bags produced by those who crocheted from the patterns were not really copies but rather novel expressions of the brand. The crocheted bags also offer ironic commentary on that nemesis of the fashion industry, the fashion counterfeiter.

Von Busch carried out an industrial hack in a small rural shoe manufacturer in Norway. At the time of his hack, the company was suffering from competitive woes that led to the gradual reduction of its workforce from a couple of hundred to ten employees. At this low point in the company's history, Von Busch engaged employees in a workshop involving six prominent Norwegian fashion designers, an established fashion photographer, a stylist, and a shoemaker/teacher. Von Busch explained:

The hope was to create some new approaches to post-industrial production and try to probe 'nonlinear' means of action and co-design, open for spontaneity and crafty interventions during the normally strictly linear production process ... All the experimentation during the workshop was to be firmly based on collaboration on the factory floor. An ability to merge these roles and create a wider range of possibilities for interaction between the participants would change the flow within the factory, while at the same time create unique designs, using the full skill of all those involved.⁵¹

The process combined chaos with the traditional manufacturing technology used by the company known as Dale Sko (*sko* means 'shoe' in Norwegian):

Operational misuse of the factory equipment, using machines at the wrong moment in the process, assembling pieces in wrong order or using wrong sizes of tools for various elements in production proved to be ways that opened new action spaces ... [even though t]his can only be done in small quantities [and] still remain within mass-production or economy of scale, and this mix of craft and mass-production is the scale of manufacture for a small factory such as Dale Sko.

Von Busch next described how the workers reacted during the three-day workshop:

During the first day of the workshop the atmosphere was filled with anticipation and at first the craftsman of the factory seemed slightly skeptical of the working process. Why change? But as the process went on the mood changed. On the first day, all workers went home when the bell rang signaling the end of the working day. But on the last day of the workshop many of the workers stayed after working hours, helping the participants to finish their shoes and chatting.

To explain the role the designers played, Von Busch described how one of them worked with the process:

It is perhaps the works of [designer] Siv Støldal that can be seen as a quintessential modus operandi of this type of hacking. She used the already existing models from Dale Sko, recombined materials and parts into new forms. She changed leather materials, shifted soles between models, and introduced random punched decorations into the designs. But at the same time she preserved the general design of every sub-part intact. With these schemes for individualizing the shoes, every pair became unique. Still preserving the integrity of the traditional models from Dale Sko this model became a point of departure and an instrument for her future collaborations with Dale Sko.

The project attracted media attention that brought important benefits for Dale Sko:

During the workshop, the project also received an amount of local coverage in the press, radio and TV. Bringing in the eyes of media as well as putting the spotlight on the collaborative working process created a renewed pride in the craft element in the factory. Dale Sko came to be recognized and respected not only for its century old merits but also for its concern to go further, innovate and continue to be a progressive local player with global fashion connections. The media attention became a form of recognition for this hard work and boosted the confidence of the factory ... The factory, in the past the main employer and gem of the town, now demonstrate[d] an imaginative and innovative spirit with high future ambitions and is now once again the source of local pride.

Other results were equally impressive:

After the finish of the workshop the traces of the project are still visible today. Støldal has continued her collaboration with Dale Sko and is currently making her fourth collection with them, still using the existing models as a practical point of departure. The new shoes have been shown at the fashion weeks in London, Paris and Tokyo and are for sale in stores in London and other cities. The factory also developed a prototype lab and since the hack has hosted several other designers and interns from fashion schools. In addition, the board of directors of the factory has been changed and one designer as well as the shoemaker/teacher was taken onto the board. In 2008 the project also won a special prize at the European Fashion Awards.

Von Busch claimed that his hack of Dale Sko deliberately confronted modern technology with postmodern ways of organizing. It also shows a designer intentionally using lines of flight as inspiration for designing an intervention that changed an organization. Von Busch demonstrated how hacking can generate creative solutions to problems left behind by modernist industrial organizing practices, thereby changing those very technologies. His method of helping Dale

Sko escape the constraints of its former work practices shows how lines of flight created change in that organization's practices and could be adapted to inspire change in other organizations.

Summary

Every organization consists of social elements, including people, their positions or jobs, and the groups or units to which they are assigned. Modernists define social structure mainly in terms of three types of relationship among an organization's people, positions, and units: division of labor, hierarchy, and coordination mechanisms. The division of labor indicates who does what in terms of tasks that are grouped into positions in the hierarchy. The division of labor and distribution of assigned tasks, in turn, creates dependencies between jobholders, whose activities require coordination to manage interdependencies. The hierarchy of authority defines formal reporting relationships that can handle some of the needed coordination, but other mechanisms are also used. Coordination mechanisms, ranging from formal rules and procedures to spontaneous and informal hallway conversations, augment the social structure of the organization.

Dimensions of social structure that continue to interest modernist organization theorists include centralization/decentralization, differentiation/integration, and size. Another distinction of continued importance contrasts mechanistic with organic organizing. Contingency theory offers advice for structuring organizations that is based on empirical studies of the relationship between these and other dimensions of social structure, contingency factors such as characteristics of the environment, and organizational performance. For example, research based on early applications of contingency theory showed that small organizations operating in stable environments using routine technologies are best organized as simple or functional structures having minimal hierarchy and highly centralized decision-making, while large organizations require different structures due to their greater degree of vertical and horizontal

differentiation and need for integration. Successful large organizations in stable environment are characterized by formalization, routinization, and specialization, while those operating successfully in unstable environments have organic organizational structures that rely on decentralization to prevent decision-making bottlenecks and to make the most of technical or professional knowledge held by lower level employees. As new contingencies like these are discovered, new patterns of relationships appear, and this leads to even more complex formulations of contingency theory that make it so complex as to be unwieldy.

Other modernist organization theorists offer alternatives to the static approaches described above. One focuses on how organizational structures change as organizations grow. Greiner's organizational lifecycle theory proposed that organizations grow through a series of predictable evolutions and revolutions or crises. Each crisis overcome propels the organization into its next evolutionary phase, until the organization ultimately dies. The intermediate phases are described as entrepreneurial, collectivity, delegation, formalization, and renewal, each followed respectively by crises of leadership, autonomy, control, red tape, and decline. A second modernist theory of structural change was offered by Katz and Kahn, whose open systems theory models the evolution of an organization's structure as it develops support, maintenance, and adaptive layers in response to changes in both the internal demands of its technical core and the external demands of its environment.

A more dynamic alternative to theorizing social structural change developed within the symbolic perspective. Instead of treating social structures as modernist objects to be manipulated, symbolic organization theorists proposed that they arise in and from human interaction and social practices, the study of which reveals organizing as an ongoing accomplishment rather than a stable structure. Therefore symbolic researchers focused their attention on structuring and organizing activities or practices. Giddens, for example, theorized that while social structures enable and constrain human action and the social practices that shape it, those same actions and practices constitute social structure. Giddens' structuration theory proposed that agency expressed through communication, power, and sanction is

codeterminant with structures of signification, domination, and legitimation, and that their duality is instantiated in the modalities of interpretive schemes, facility, and norms. Interpretive schemes align structures of signification with the communication practices of agents; power relations facilitate the alignment of domination structures with agents' ability to act; norms influence the alignment of legitimation structures with the ways agents sanction one another's behavior. Structuration theory turned attention to the micro level of activities underpinning structural phenomena and how these reveal the symbolism, meaning, and interpretation that lie beneath the practices of organizing. Following structuration theory, symbolic organization theorists focused attention on routines and improvisation as organizing practices.

Postmodern challenges to modernist ways of looking at organizational social structure produced additional alternatives to modern organization theory. Advocates of postmodernism add concepts such as de-differentiation and feminist bureaucracy, as well as anti-administration theory, to the literature on organizational social structure, and ideas involving lines of flight and hacktivism suggest actions that undermine modernist organizing structures and practices.

Further reading

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Notes

- .. See Weber (1946, 1947), as cited in Parsons (1947) and Scott (1992).
- !. Davis (2013).
- }. du Gay (2000).
- l. Hage (1974); Rousseau (1978).
- o. Pugh and Turner (1968); Pugh and Hickson (1979).
- o. Grinyer and Yasai-Ardekani (1980).
- ’. Lawrence and Lorsch (1967).
- o. Pugh and Turner (1968); Pugh and Hinings (1969); Blau and Schoenherr (1971); Mansfield (1973).
- o. Burns and Stalker (1961).
- o). Figures accessed in 2012 on McDonald’s website:
http://www.aboutmcdonalds.com/mcd/our_company.html (accessed December 22, 2017). In 2015 McDonald’s reported 420,000 employees working for McDonald’s Corporation, including its wholly owned retail outlets, but many more work for the 80 percent of McDonald’s outlets that are franchised. This data was found in the 10-K report the company filed in 2015: <http://corporate.mcdonalds.com/mcd/investors/financial-information/sec-filings.html> (accessed December 22, 2017).

1. McDonald's website:
http://corporate.mcdonalds.com/mcd/sustainability/sustainability_CR_reports.html (accessed December 22, 2017).
2. <http://abcnews.go.com/Business/mcdonalds-us-uk-british-ceo-transform-burger-chain/story?id=28575441> (accessed December 22, 2017).
3. Lawrence and Lorsch (1967).
4. Donaldson (1996).
5. https://www.honolulu.gov/rep/site/bfs/bfs_docs/Volume1OperatingProgramandBudgetFY201 (accessed December 22, 2017).
6. <https://history.nasa.gov/orgcharts/orgcharts.html> (accessed December 22, 2017).
7. <http://www.londonstockexchange.com/exchange/news/market-news/market-news-detail/BT.A/12680211.html> (accessed December 22, 2017).
8. <https://www.usgs.gov/science/regions> (accessed December 22, 2017).
9. Windeler and Sydow (2001).
10. See article about Benetton's 'Unhate' advertisements showing world leaders kissing, one example of the longstanding effort this company makes to address political and social issues with consciousness-raising advertising campaigns:
https://www.huffingtonpost.com/2012/06/20/benetton-unhate-campaign-cannes-ad-festival-award_n_1613757.html (accessed December 22, 2017).
1. Porter (1985).
2. <https://www.uber.com/our-story/> (accessed December 22, 2017).
3. Greiner (1972).
4. Katz and Kahn (1966).
5. Giddens (1979, 1984); see also Ranson, Hinings, and Greenwood (1980); Riley (1983); Barley and Tolbert (1997).
6. Barley and Tolbert (1997)
7. Emirbayer and Mische (1998).
8. Bourdieu (1980/1990).
9. Mauss (1973).
10. Yoshino and Fagan (2003: 9).
1. See, e.g. Stene (1940); Cyert and March (1963).
2. March (1991); Olivera and Argote (1999).
3. Huber (1991); Stene (1940) used the metaphor of habits; March and Simon (1958) suggested the metaphor of programs; the metaphor of genetic material was introduced by Nelson and Winter (1982); see also McKelvey (1982).
4. Feldman (2000).
5. Feldman and Pentland (2003).
6. Feldman and Orlikowski (2011).

7. Gene Santoro (2000: 346); see also <http://www.jazzshelf.org/minguspageahum.html> (accessed December 22, 2017), which reports that quote as Mingus' response to free jazz. See Kamoche, Cunha, and da Cunha (2002) for a recent selection of influential articles on organizational improvisation.
3. Weick (1998).
3. Hatch (1993).
3. Moorman and Miner (1998a, 1998b) and Miner, Bassoff, and Moorman (2001) described the role that improvisation plays in aiding new product development teams.
1. Pina e Cunha, Miner, and Antonacopoulou (forthcoming).
2. Cooper and Burrell (1988).
3. Clegg (1990).
1. Lash (1990).
5. Farmer (1997).
3. Ferguson (1984); Martin (1990); Eisenstein (1995); Gherardi (1995).
7. Ashcraft (2001).
3. Von Busch (2008).
3. Deleuze and Guattari (2004).
3. You can read about the Counterfeit Crochet Project and see images of the crocheted items produced for the project by visiting http://www.stephaniesjuco.com/p_counterfeit_crochet.html or <https://www.flickr.com/photos/49646846@N00/sets/72157600032922624/> (accessed December 22, 2017).
1. This and the remaining quotes are from Von Busch (2008: 208–14).

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