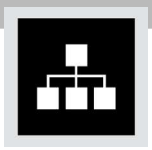

chapter
3

Getting Organized

Organizing is what you do before you do something, so that when you do it, it is not all mixed up.

—A. A. Milne

Watching an eight-oar racing crew skim along the Charles River is like watching a highly choreographed ballet group perform *Swan Lake*. To a coxswain's cadence, eight oars at exactly 90 degrees enter the water in unison. A collective pull "in swing" propels the shell smoothly forward as eight oars leave the water at a precise perpendicular angle. If any oarsman muffs just one of these strokes or "catches a crab," the shell is thrown off kilter. Close coordination welds eight rowers into a harmonious crew.

It looks straightforward to an outside observer, an effortless ballet in motion. But structurally it is more complicated. All members of a crew are expected to row smoothly and quickly. But expectations for individuals vary depending on the seat they occupy. Bow seats one, two, and three have the greatest potential to disrupt the boat's direction, so they must be able to pull a perfect oar one stroke after another. Rowers in seats four, five, and six are the boat's biggest and strongest. They are often referred to as the "engine," providing the boat's raw power. Seat seven's rower provides a conduit between the engine room and the "stroke oar" in seat eight. The "stroke oar" sits directly facing the coxswain and rows at the requested rate of speed and power, setting the pace and intensity for the other rowers.

Reframing Organizations: Artistry, Choice, and Leadership, Sixth Edition. Lee G. Bolman and Terrence E. Deal.

The coxswain is responsible for steering the shell, but also serves as captain. Coxswains vocally determine both the rate and degree of power of the oar strokes. They know their rowers physically and psychologically and how to inspire their best efforts. They also know opponents' strengths and weaknesses. Before a race, the coxswain develops a strategy but must be ready to alter it as a situation demands. A good coxswain is "a quarterback, a cheerleader, and a coach all in one. He or she is a deep thinker, canny like a fox, inspirational, and in many cases the toughest person in the boat" (Brown, 2014, p. 232).

The individual efforts are also integrated by shared agreement that the team effort transcends the individual. All rowers have to optimize their strokes for the benefit of the boat. Coordination and cooperation among individuals of different statures and strengths assures the unified and beautiful symphony that a crew in motion becomes. In crew racing competition, structure is vital to top performance.

Structure is equally critical in larger organizations. Jeff Bezos, one of the world's most admired CEOs, is passionate about structure and process at the company he founded, Internet giant Amazon. He makes the company's strategy crystal clear. Embracing the familiar credo that the "customer is always right," Bezos is riveted on figuring out what the customer wants and delivering it with speed and precision. His "culture of metrics" coddles Amazon's 250 million shoppers, not its quarter million employees.

Amazon tracks its performance against some 500 measurable goals; almost 80 percent relate directly to customer service. Even the smallest delay in loading a Web page is carefully scrutinized, because Amazon has found that ". . . a .01 second delay in page rendering can translate into a 1 percent drop in customer activity" (Anders, 2012). Supervisors measure and monitor employees' performance, observing behavior closely to see where steps or movements can be streamlined to improve efficiency.

Amazon is a classic example of a highly developed organizational structure—clear strategy, focus on the mission, well-defined roles, and top-down coordination. Some employees grumble about the working conditions and the fast pace, but many others find the tempo exhilarating. Bezos makes it clear: The customer is number one. Period. Amazon began as an online bookstore, but now it sells almost anything that can be shipped or downloaded. The company lost money for many years after its founding in 1995. But in recent years, it has been consistently profitable, and its 2015 annual report noted that it had achieved $100 billion in sales faster than any company in history (Amazon, 2015).

The benefits of getting structure right are obvious under normal conditions and even more so when organizational architecture meets unexpected crises. Recall the horror of 9/11 and the breakdown in coordination between New York City's fire and police departments as they confronted the aftermath of terrorist strikes on the World Trade Center. That day saw

countless inspiring examples of individual heroism and personal sacrifice. At the risk of their own lives, emergency personnel rescued thousands of people. Many died in the effort. But extraordinary individual efforts were hindered or thwarted by breakdowns in communication, command, and control. Police helicopters near the north tower radioed that it was near collapse more than twenty minutes before it fell. Police officers got the warning, and most escaped. But there was no link between fire and police radios, and the commanders in the two departments could not communicate because their command posts were three blocks apart. It might not have helped even if they had talked, because the fire department's radios were notoriously unreliable in high-rise buildings.

The breakdown of communication and coordination magnified the death toll—including 121 firefighters who died when the north tower collapsed. The absence of a workable structure undermined the heroic efforts of highly dedicated, skilled professionals who gave their all in an unprecedented catastrophe (Dwyer, Flynn, and Fessenden, 2002).

The contrast between Amazon's operations and the rescue efforts at the World Trade Center highlights a core premise of the structural lens. The right combination of goals, roles, relationships, and coordination is essential to organizational performance. This is true of all organizations: families, clubs, hospitals, military units, businesses, schools, churches, and public agencies. The right structure combats the risk that individuals, however talented, will become confused, ineffective, apathetic, or hostile. The purpose of this chapter and the next two is to identify the basic ideas and inner workings of a perspective that is fundamental to collective human endeavors.

We begin our examination of the structural frame by highlighting its core assumptions, origins, and basic forms. The possibilities for designing an organization's social architecture are almost limitless, but any option must address two key questions: How do we allocate responsibilities across different units and roles? And, once we've done that, how do we integrate diverse efforts in pursuit of common goals? In this chapter, we explain these basic issues, describe the major options, and discuss imperatives to consider when designing a structure to fit the challenges of a unique situation.

STRUCTURAL ASSUMPTIONS

The central beliefs of the structural frame reflect confidence in rationality and faith that a suitable array of roles and responsibilities will minimize distracting personal static and maximize people's performance on the job. Where the human resource approach (to be discussed in Chapters 6 through 8) emphasizes dealing with issues by changing people (through coaching, training, rotation, promotion, or dismissal), the structural perspective

argues for putting people in the right roles and relationships. Properly designed, these formal arrangements support and accommodate both collective goals and individual differences.

Six assumptions undergird the structural frame:

1. Organizations exist to achieve established goals and objectives and devise strategies to reach those goals.
2. Organizations increase efficiency and enhance performance through specialization and appropriate division of labor.
3. Suitable forms of coordination and control ensure that diverse efforts of individuals and units mesh.
4. Organizations work best when rationality prevails over personal agendas and extraneous pressures.
5. Effective structure fits an organization's current circumstances (including its strategy, technology, workforce, and environment).
6. When performance suffers from structural flaws, the remedy is problem solving and restructuring.

ORIGINS OF THE STRUCTURAL PERSPECTIVE

The structural view has two principal intellectual roots. The first is the work of industrial analysts bent on designing organizations for maximum efficiency. The most prominent of these, Frederick W. Taylor (1911), was the father of time-and-motion studies; he founded an approach that he labeled "scientific management." Taylor broke tasks into minute parts and retrained workers to get the most from each motion and moment spent at work. Other theorists who contributed to the scientific management approach (Fayol, [1919] 1949; Urwick, 1937; Gulick and Urwick, 1937) developed principles focused on specialization, span of control, authority, and delegation of responsibility.

A second pioneer of structural ideas was the German economist and sociologist Max Weber, who wrote around the beginning of the twentieth century. At the time, formal organization was a relatively new phenomenon. Patriarchy rather than rationality was still the primary organizing principle. A father figure—who ruled with almost unlimited authority and power—dominated patriarchal organizations. He could reward, punish, promote, or fire on personal whim. Seeing an evolution of new structural models in late-nineteenth-century Europe, Weber described "monocratic bureaucracy" as an ideal

form that maximized efficiency and norms of rationality. His model outlined several major features that were relatively novel at the time, although they are commonplace now:

- A fixed division of labor
- A hierarchy of offices
- A set of rules governing performance
- A separation of personal from official property and rights
- The use of technical qualifications (not family ties or friendship) for selecting personnel
- Employment as primary occupation and long-term career (Weber, 1947)

After World War II, Blau and Scott (1962), Perrow (1986), Thompson (1967), Lawrence and Lorsch (1967), Hall (1963), and others rediscovered Weber's ideas. Their work inspired a substantial body of theory and research amplifying the bureaucratic model. They examined relationships among the elements of structure, looked closely at why organizations develop one structure over another, and analyzed the effects of structure on morale, productivity, and effectiveness.

Greatest Hits from Organization Studies

Hit Number 5: James D. Thompson, *Organizations in Action: Social Science Bases of Administrative Theory* (New York: McGraw-Hill, 1967)

"Organizations act, but what determines how and when they will act?" (p. 1). That guiding question opens Thompson's compact, tightly reasoned book. He answers that "organizations do some of the basic things they do because they must—or else! Because they are expected to produce results, their actions are expected to be reasonable, or rational" (p. 1). As Thompson sees them, organizations operate under "norms of rationality," but uncertainty makes rationality hard to achieve. "Uncertainties pose major challenges to rationality, and we will argue that technologies and environments are basic sources of uncertainty for organizations. How these facts of organizational life lead organizations to design and structure themselves needs to be explored" (p. 1).

Thompson looked for a way to meld two distinct ways of thinking about organizations. One was to see them as closed, rational systems (as in Taylor's scientific management and Weber's theory of bureaucracy). The second viewed them as open, natural systems in which "survival of the system is taken to be the goal, and the parts and their relationships are presumably determined through evolutionary processes" (p. 6). Thompson tried to build on a "newer tradition" emerging from the work of March and Simon (1958, number 8 of our greatest hits in organization studies) and Cyert and March (1963, number 3). This tradition viewed organizations as "problem facing and problem solving" in a context of limited information and capacities.

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With these premises, Thompson developed a series of propositions about how organizations design and manage themselves as they seek rationality in an uncertain world. The two primary sources of uncertainty, in his view, are technology and the environment. He distinguished three kinds of technology—pooled, sequential, and reciprocal—each making different demands on communication and coordination. Because demands and intrusions from the environment threaten efficiency, organizations try to increase their ability to anticipate and control the environment and attempt to insulate their technical core from environmental fluctuations. Still another source of uncertainty is the "variable human." The more uncertainty an organization faces, the more discretion individuals need to cope with it, but there is the risk that discretion will run amok. "Paradoxically, the administrative process must reduce uncertainty but at the same time search for flexibility" (Thompson, pp. 157–158).

STRATEGY

Strategy comes from a Greek word that originally referred to the art of military leaders. It was imported into the business context in the twentieth century as a way to talk about an organization's overall approach to goals and methods. Strategy has been defined in many ways. Mintzberg (1987), for example, offers five of them, all beginning with the letter P:

1. Plan: a conscious and intentional course of action.
2. Perspective: an organization's way of framing where it wants to go and how it intends to get there.
3. Pattern: a consistent pattern of decisions.
4. Position: the way an organization positions itself in relationship to its environment.
5. Ploy: a plan or decision whose purpose is to provoke a reaction from competitors.

Some of Mintzberg's Ps focus on thinking while others are more about action. All are elements of a coherent strategy. Roberts (2004) argues that the job of the general manager is to define a strategy that includes objectives, a statement of scope, a specification of the organization's competitive advantage, and the logic for how the organization will succeed. Structural logic dictates that an organization's success requires alignment of strategy, structure, and environment. But, as Chandler noted in 1962, "structure follows strategy." A good strategy needs to be specific enough to provide direction but elastic enough to adapt to changing circumstances.

Eastman Kodak provides a classic case in point. Kodak developed a strategy that made it a dominant player in the film industry for many decades, but stayed with its approach too

long and finally ended in bankruptcy. In 1880, George Eastman developed a formula for gelatin-based dry plates, the basis for the then nascent field of photography. For the next 125 years the company's strategy sought to capitalize on this technology by introducing products such as the Kodak Brownie camera, Kodachrome, the Kodak Instamatic camera, and gold standard motion picture film—as well as producing thousands of patents in related fields. Pursuing this strategy the company's performance soared. At its zenith, Kodak employed over 145,000 people and earned billions of dollars in sales (Brachmann, 2014). It was one of America's best-known and most-admired companies.

Threats to Kodak's film-based strategy surfaced as early as 1950 with the introduction of instant photography and the Polaroid camera. In the 1980s, Fujifilm, an upstart Japanese competitor, was able to mass produce film and sell it at a cheaper price to discount retailers like Walmart. Kodak couldn't compete and lost a large share of the film market (Brachmann, 2014).

The death knell for Kodak came in the midseventies with the invention of the digital camera. Ironically, it was invented in one of the company's labs by one of its own engineers. Upper management's reaction: "It's cute but don't tell anyone about it" (Chunka, 2012). Kodak's protection of its film-based strategy and inability to see that digital would capture the market led to its decline and eventual bankruptcy filing in January, 2012.

What kept Kodak from adapting to a changing world? The strategy led to an organizational structure that channeled the activities and thinking of top management in one primary direction: film! In that context, any effort to promote digital cameras required swimming upstream against a strong current.

A similar thing happened at Xerox. Xerox researchers had developed the concepts for the graphical user interface and mouse, but the company's structure and business model were built around photocopying, not computers. Steve Jobs at Apple and Bill Gates at Microsoft immediately saw the market potential that Xerox executives missed. Kodak and Xerox, like many other companies, were never able to capitalize on their own inventions because they fell outside the corporate strategy. Christensen (1997) calls it "the innovator's dilemma," and notes that one reason firms get stuck in the past is that standard cost-benefit analysis usually tells them that they will get a better return by investing in the tried and true instead of something new and unproven. As at Kodak and Xerox, the game is usually lost before the numbers tell a different story.

STRUCTURAL FORMS AND FUNCTIONS

Structure provides the architecture for pursuing an organization's strategic goals. It is a blueprint for expectations and exchanges among internal players (executives, managers,

employees) and external constituencies (such as customers, competitors, regulators, and clients). Like an animal's skeleton or a building's framework, structure both enhances and constrains what an organization can do. The alternative design possibilities are virtually infinite, limited only by human preferences and capacities, technological limits, and constraints in the surroundings.

We often assume that people prefer structures with more choices and latitude (Leavitt, 1978), but this is not always the case. A study by Moeller (1968), for example, explored the effects of structure on teacher morale in two school systems. One was loosely structured and encouraged wide participation in decision making. Centralized authority and a clear chain of command characterized the other. Moeller was surprised to find the opposite of what he expected: Faculty morale was higher in the district with a tighter structure. Teachers seemed to prefer clarity of expectations, roles, and lines of authority.

United Parcel Service, "Big Brown," provides a contemporary example of the benefits of structural certainty and clarity. In the company's early days, UPS delivery employees were "scampering messenger boys" (Niemann, 2007). Since then, computer technology has curtailed employee discretion, and every step from pickup to delivery is highly programmed. Detailed instructions specify placement of packages on delivery trucks. Drivers follow computer-generated routes (which minimize mileage and left turns to save time and gas). Newly scheduled pickups automatically download into the nearest driver's route plan.

UPS calculates in advance the numbers of steps to your door. If a driver sees you while walking briskly to your door, you'll receive a friendly greeting. Look carefully and you'll probably notice the automated van lock the driver carries. Given such a tight leash, you might expect demoralized employees. But, the technology makes the job easier and enables drivers to be more productive. As one driver remarked to us with a smile, "We're happy robots."

Do these examples prove that a tighter structure is better? Sometimes the opposite is true. Adler and Borys (1996) argue that the type of structure is as important as the amount or rigidity. There are good rules and bad ones. Formal structure enhances morale if it helps us get our work done. It has a negative impact if it gets in our way, buries us in red tape, or makes it too easy for management to control us. Equating structure to rigid bureaucracy confuses "two very different kinds of machines, those designed to de-skill work and those designed to leverage users' skills" (p. 69).

Structure, then, need not be machinelike or inflexible. Structures in stable environments are often hierarchical and rules oriented. But recent years have witnessed remarkable inventiveness in designing structures emphasizing flexibility, participation, and quality. A prime example is BMW, the luxury automaker whose success formula relies on a combination of stellar quality and rapid innovation. "Just about everyone working for

the Bavarian automaker—from the factory floor to the design studios to the marketing department—is encouraged to speak out. Ideas bubble up freely and there is never a penalty for proposing a new way of doing things, no matter how outlandish. The company has become an industry benchmark for high-performance premium cars, customized production, and savvy brand management" (Edmondson, 2006, p. 72. Copyright © 2006 McGraw-Hill Companies, Inc.).

Dramatic changes in technology and the business environment have rendered old structures obsolete at an unprecedented rate, spawning a new interest in organizational design (Nadler, Gerstein, and Shaw, 1992; Bryan and Joyce, 2007; Roberts, 2004). Pressures of globalization, competition, technology, customer expectations, and workforce dynamics have prompted organizations worldwide to rethink and redesign structural prototypes. A swarm of items compete for managers' attention—money, markets, people, and technological competencies, to name a few. But a significant amount of time and attention must be devoted to social architecture—designing structures that allow people to do their best:

> CEOs often opt for the ad hoc structural change, the big acquisition, or a focus on where and how to compete. They would be better off focusing on organizational design. Our research convinces us that in the digital age, there is no better use of a CEO's time and energy than making organizations work better. Most companies were designed for the industrial age of the past century, when capital was the scarce resource, interaction costs were high and hierarchical authority and vertically integrated structures were the keys to efficient operation. Today superior performance flows from the ability to fit these structures into the present century's very different sources of wealth creation (Bryan and Joyce, 2007, p. 1).

BASIC STRUCTURAL TENSIONS

Two issues are central to structural design: how to allocate work (differentiation) and how to coordinate diverse efforts after parceling out responsibilities (integration). Even in a group as small and intimate as a family, it is important to settle issues concerning who does what, when the "what" gets done, and how individual efforts mesh to ensure harmony. Every family will find an arrangement of roles and synchronization that works—or suffer the fallout.

Division of labor—or allocating tasks—is the keystone of structure. Every living system creates specialized roles to get important work done. Consider an ant colony: "Small workers . . . spend most of their time in the nest feeding the larval broods; intermediate-sized workers constitute most of the population, going out on raids as well as doing other

jobs. The largest workers . . . have a huge head and large powerful jaws. These individuals are . . . soldiers; they carry no food but constantly run along the flanks of the raiding and emigration columns" (Topoff, 1972, p. 72).

Like ants, humans long ago discovered the virtues of specialization. A job (or position) channels behavior by prescribing what someone is to do—or not do—to accomplish a task. Prescriptions take the form of job descriptions, procedures, routines, protocols, or rules (Mintzberg, 1979). On one hand, these formal constraints can be burdensome, leading to apathy, absenteeism, and resistance (Argyris, 1957, 1964). On the other, they help to ensure predictability, uniformity, and reliability. If manufacturing standards, aircraft maintenance, hotel housekeeping, or prison sentences were left solely to individual discretion, problems of quality and equity would abound.

Once an organization spells out positions or roles, managers face a second set of key decisions: how to group people into working units. They have several basic options (Mintzberg, 1979):

- Function: Groups based on knowledge or skill, as in the case of a university's academic departments or the classic industrial units of research, engineering, manufacturing, marketing, and finance.
- Time: Units defined by when they do their work, as by shift (day, swing, or graveyard shift).
- Product: Groups organized by what they produce, such as detergent versus bar soap, wide-body versus narrow-body aircraft.
- Customer: Groups established around customers or clients, as in hospital wards created around patient type (pediatrics, intensive care, or maternity), computer sales departments organized by customer (corporate, government, education, individual), or schools targeting students in particular age groups.
- Place: Groupings around geography, such as regional or international offices in corporations and government agencies or neighborhood schools in different parts of a city.
- Process: Grouping by a complete flow of work, as with "the order fulfillment process. This process flows from initiation by a customer order, through the functions, to delivery to the customer" (Galbraith, 2001, p. 34).

Creating roles and units yields the benefits of specialization but creates challenges of coordination and control—how to ensure that diverse efforts mesh. Units tend to focus on

their separate priorities and strike out on their own, as New York's police and fire departments did on 9/11. The result is *suboptimization*—individual units may perform splendidly in terms of their own goals, but the whole may add up to much less than the sum of the parts. This problem plagued Tom Ridge, who was named by President George W. Bush as the director of homeland security in the aftermath of the 9/11 terrorist attacks. His job was to resolve coordination failures among the government's many different units that dealt with security. But he was more salesman and preacher than boss, and he lacked the authority to compel compliance. Ridge's slow progress led President Bush to create a cabinet-level Department of Homeland Security. The goal was to cluster independent security agencies under one central authority.

As often happens, the new structure created its own problems. Folding the Federal Emergency Management Agency into the mix reduced FEMA's autonomy and shifted its priorities toward security and away from its core mission of disaster relief. The same agency that had responded nimbly to hurricanes and earthquakes in the 1990s was slow and ponderous in the aftermath of Hurricane Katrina and lacked authority and budget to move without a formal okay from the new Secretary of Homeland Security (Cooper and Block, 2006).

Successful organizations employ a variety of methods to coordinate individual and group efforts and to link local initiatives with system-wide goals. They do this in two primary ways: vertically, through the formal chain of command, and laterally, through meetings, committees, coordinating roles, or network structures. We next look at each of these strategies in detail.

VERTICAL COORDINATION

With vertical coordination, higher levels coordinate and control the work of subordinates through authority, rules and policies, and planning and control systems.

Authority

The most basic and ubiquitous way to harmonize the efforts of individuals, units, or divisions is to designate a boss with formal authority. Authorities—executives, managers, and supervisors—are charged with keeping action aligned with strategy and objectives. They do this by making decisions, resolving conflicts, solving problems, evaluating performance and output, and distributing rewards and sanctions. A chain of command is a hierarchy of managerial and supervisory strata, each with legitimate power to shape and direct the behavior of those at lower levels. It works best when authority is both endorsed by

subordinates and authorized by superiors (Dornbusch and Scott, 1975). In military organizations such as an aircraft carrier or a commando team, for example, the chain of command is usually clear and universally accepted. In schools and human service organizations authority relations are often fuzzier or more contested.

Rules and Policies

Rules, policies, standards, and standard operating procedures are developed to ensure that individual behavior is predictable and consistent. Rules and policies govern conditions of work and specify standard ways of completing tasks, handling personnel issues, and relating to customers and others. The goal is to ensure the handling of similar situations in comparable ways and to avoid "particularism" (Perrow, 1986)—responding to specific issues based on personal whims or political pressures. Two citizens' complaints about a tax bill are supposed to be treated similarly, even if one citizen is a prominent politician and the other a shoe clerk. Once a situation is defined as fitting a particular rule, the course of action is clear, straightforward and, in an ideal world, almost automatic.

A standard is a benchmark to ensure that goods and services maintain a specified level of quality. Measurement against the standard makes it possible to identify and fix problems. During the 1970s and 1980s, American manufacturing standards lagged, while Japanese manufacturers were scrupulous in ensuring that high standards were widely known and universally accepted. In one case, an American company ordered ball bearings from a Japanese plant. The Americans insisted on what they saw as a daunting standard—no more than 20 defective parts per thousand. The order arrived with a separate bag of 20 defective bearings and a note: "We were not sure why you wanted these, but here they are." More recently, pressure for world-class quality has spawned growing interest in "Six Sigma," a statistical standard of near perfection (Pyzdek, 2003). Although Six Sigma has raised quality standards in many companies around the world, its laser focus on measurable aspects of work processes and outcomes has sometimes hampered creativity in innovative companies such as 3M (Hindo, 2007, pp. 8–12). Safe and measurable may crowd out the elusive breakthroughs a firm needs.

Standard operating procedures (SOPs) reduce variance in routine tasks that have little margin for error. Commercial airline pilots typically fly with a different crew every month. Cockpit actions are tightly intertwined, the need for coordination is high, and mistakes can kill. SOPs consequently govern much of the work of flying a plane. Pilots are trained extensively in the procedures and seldom violate them. But a significant percentage of aviation accidents occur in the rare case in which someone does. More than one airplane has crashed on takeoff after the crew missed a required checklist item.

SOPs can fall short, however, in the face of "black swans" (Taleb, 2007)—freak surprises that the SOPs were never designed to handle. In the 9/11 terrorist attacks, pilots followed standard procedures for dealing with hijackers: cooperate with their demands and try to get the plane on the ground quickly. These SOPs were based on a long history of hijackers who wanted to make a statement, not wreak destruction on a suicide mission. Passengers on United Airlines flight 93, who had learned via cell phones that hijackers were using aircraft as bombs rather than bully pulpits, abandoned this approach. They lost their lives fighting to regain control of the plane, but theirs was the only one of four hijacked jets that failed to devastate a high-profile building.

Planning and Control Systems

Reliance on planning and control systems—forecasting and measuring—has mushroomed since the dawn of the computer era. Retailers, for example, need to know what's selling and what isn't. Point-of-sale terminals now yield that information instantly. Data flow freely up and down the hierarchy, greatly enhancing management's ability to oversee performance and respond in real time.

Mintzberg (1979) distinguishes two major approaches to control and planning: performance control and action planning. Performance control specifies results (for example, "increase sales by 10 percent this year") without specifying how to achieve them. Performance control measures and motivates individual efforts, particularly when targets are reasonably clear and calculable. Locke and Latham (2002) make the case that clear and challenging goals are a powerful incentive to high performance. Performance control is less successful when goals are ambiguous, hard to measure, or of dubious relevance. A notorious example was the use of enemy body counts by the U.S. military to measure combat effectiveness in Vietnam. Field commanders became obsessed with "getting the numbers up," and were often successful. The numbers painted a picture of progress, even as the war was being lost. Meanwhile, as an unintended consequence, American troops had an incentive to kill unarmed civilians in order to raise the count (Turse, 2013).

Action planning specifies how to do something—methods and time frames as in "increase this month's sales by using a companywide sales pitch" (Mintzberg, 1979, pp. 153–154). Action planning works best when it is easier to assess how a job is done than to measure its outcome. This is often true of service jobs. McDonald's has clear specifications for how counter employees are to greet customers (for example, with a smile and a cheerful welcome). United Parcel Service has a detailed policy manual that specifies how a package should be delivered. The objective is customer satisfaction, but it is easier to monitor employees' behavior than customers' reactions. An inevitable risk in action planning is that

the link between action and outcome may fail. When that happens, employees may get bad results by doing just what they're supposed to do. Unions sometimes use this as a bargaining chip by telling employees to "work to rule"—scrupulously observing every detail in every procedure—because it is often an effective way to slow work to a crawl.

LATERAL COORDINATION

Behavior in organizations is often remarkably untouched by commands, rules, and systems. Lateral techniques—formal and informal meetings, task forces, coordinating roles, matrix structures, and networks—pop up to fill the gaps. Lateral forms are typically less formal and more flexible than authority-based systems and rules. They are often simpler and quicker as well.

Meetings

Formal gatherings and informal exchanges are the cornerstone of lateral coordination. All organizations have regular meetings. Boards confer to make policy. Executive committees gather to make strategic decisions. In some government agencies, review committees (sometimes known as "murder boards") convene to examine proposals from lower levels. Formal meetings provide the lion's share of lateral harmonization in relatively simple, stable organizations—for example, a railroad with a predictable market, a manufacturer with a stable product, or a life insurance company selling standard policies.

But in fast-paced, turbulent environments, more spontaneous and informal contacts and exchanges are vital to take up slack and help glue things together. Pixar, the animation studio whose series of hits includes *Toy Story* (*1*, *2*, and *3*); *Finding Nemo* (and *Dory*); *Monsters, Inc.*; *WALL-E*; and *Up*, relies on a constant stream of informal connections among managers, artists, and engineers in its three major groups. Technologists develop graphics tools, artists create stories and pictures, and production experts knit the pieces together in the final film. "What makes it all work is [Pixar's] insistence that these groups constantly talk to each other. So a producer of a scene can deal with the animator without having to navigate through higher-ups" (Schlender, 2004, p. 212).

Task Forces

When organizations face complex and fast-changing environments, demand for lateral communication mushrooms. Additional face-to-face coordination devices are needed. Task forces assemble when new problems or opportunities require collaboration of diverse specialties or functions. High-technology firms and consulting firms rely heavily on project teams or task forces to synchronize the development of new products or services.

Coordinating Roles

Coordinating roles or groups use persuasion and negotiation to help dovetail the efforts of different units. They are boundary-spanners with diplomatic status who are artful in dealing across specialized turfs. For example, a product manager in a consumer goods company, responsible for the performance of a laundry detergent or low-fat snack, spends much of the day pulling together functions essential to the product's success such as R&D, manufacturing, marketing, and sales.

Matrix Structures

Until the mid-twentieth century, most companies were functionally organized. Responding to strategic complexity during the late 1950s and early 1960s, many companies shed their functional structures in favor of divisional forms pioneered by DuPont and General Motors in the 1920s. Beginning in the mid-1960s, many organizations in unwieldy environments began to develop matrix structures, even though they are often cumbersome (Peters, 1979; Davis and Lawrence, 1978.) When organizations figure out how to make matrix structures work, they solve many problems (Vantrappen and Wirtz, 2016). By the mid-1990s, Asea Brown Boveri (ABB), the Swiss-based electrical engineering giant, had grown to encompass some 1,300 separate companies and more than 200,000 employees worldwide. To hold this complex collection together, ABB developed a matrix structure crisscrossing approximately 100 countries with about 65 business sectors (Rappaport, 1992). Each subsidiary reported to both a country manager (Sweden, Germany, and so on) and a sector manager (power transformers, transportation, and the like).

The design carried the inevitable risk of confusion, tension, and conflict between sector and country managers. ABB aimed for structural cohesion at the top with a small executive coordinating committee (11 individuals from seven countries in 2016), an elite cadre of some 500 global managers, and a policy of communicating in English, even though it was a second language for most employees. Variations on ABB's structure—a matrix with business or product lines on one axis and countries or regions on another—are common in global corporations. Familiar brands like Starbucks and Whole Foods rely on matrix structures to support their successful international operations (Business Management, 2015).

Networks

Networks have always been around, more so in some places than others. Cochran (2000) describes how both Western and Japanese firms doing business in China in the nineteenth and twentieth centuries had to adapt their hierarchical structures to accommodate powerful

social networks deeply embedded in Chinese culture. One British firm tried for years, with little success, to limit the control of "Number Ones" (powerful informal leaders who headed local networks based on kinship and village) over the hiring and wages of its workforce. The proliferation of information technology beginning in the 1980s led to an explosive growth of digital networks—everything from small local grids to the global Internet. These powerful new lateral communication devices often supplanted vertical strategies and spurred the development of network structures within and between organizations (Steward, 1994). Powell, Koput, and Smith-Doerr (1996) describe the mushrooming of "interorganizational networks" in fast-moving fields like biotechnology, where knowledge is so complex and widely dispersed that no organization can go it alone. They give an example of research on Alzheimer's disease that was carried out by thirty-four scientists from three corporations, a university, a government laboratory, and a private research institute.

Many large global corporations have evolved into interorganizational networks (Ghoshal and Bartlett, 1990; Gulati and Gargiulo, 1999). Horizontal linkages supplement and sometimes supplant vertical coordination. Such a firm is multicentric: initiatives and strategy emerge from many places, taking shape through a variety of partnerships and joint ventures.

Designing a Structure That Works

In designing a structure that works, managers have a set of options for dividing the work and coordinating multiple efforts. Structure needs to be designed with an eye toward strategy, the nature of the environment, the talents of the workforce, and the available resources (such as time, budget, and other contingencies). The options are summarized in Exhibit 3.1.

Vertical or Lateral?

Vertical coordination is often efficient but not always effective and depends on employees' willingness to follow directives from above. More decentralized and interactive lateral forms of coordination are often needed to keep top-down control from stifling initiative and creativity. Lateral coordination is often more effective but costlier than its vertical counterparts. A meeting, for example, provides an opportunity for face-to-face dialogue and decision making but may squander time and energy. Personal and political agendas may undermine the meeting's purpose.

Ad hoc groups such as task forces can foster creativity and integration around pressing problems but may divert attention from ongoing operating issues. The effectiveness of coordinators who span boundaries depends on their credibility and skills in handling others.

Exhibit 3.1.
Basic Structural Options.

Division of labor: Options for differentiation	
	Function
	Time
	Product
	Customers or clients
	Place (geography)
	Process
Coordination: Options for integration	
Vertical	Authority
	Rules and policies
	Planning and control systems
Lateral	Meetings
	Task forces
	Coordinating roles
	Matrix structures
	Networks

Coordinators are also likely to schedule meetings that take still more time from actual work (Hannaway and Sproull, 1979). Matrix structures provide lateral linkage and integration but are notorious for creating conflict and confusion. Multiple players and decision nodes make networks inherently difficult to manage. Organizations have to use both vertical and horizontal procedures for coordination. The optimal blend of the two depends on the unique challenges in a given situation. Vertical coordination is generally superior if an environment is stable, tasks are well understood and predictable, and uniformity is essential. Lateral communications work best for complex tasks performed in a turbulent environment. Every organization must find a design that works for its circumstances, and inherent structural tradeoffs rarely yield easy answers or perfect solutions.

Consider the contrasting structures of McDonald's and Harvard University (highly regarded organizations in two very different industries), and Amazon and Zappos (two successful Internet retailers with very different structures).

McDonald's and Harvard: A Structural Odd Couple

McDonald's, the company that made the Big Mac a household word, has been enormously successful. For 40 years after its founding in the 1950s, the company was an unstoppable growth engine that came to dominate the worldwide fast-food business. McDonald's has a relatively small staff at its world headquarters near Chicago; the vast majority of its employees are salted across the world in more than 36,000 local outlets. But despite its size and geographic reach, McDonald's is a highly centralized, tightly controlled organization. Most big decisions are made at headquarters.

Managers and employees of McDonald's restaurants have limited discretion about how to do their jobs. Their work is controlled by technology; machines time the preparation of French fries and measure soft drinks. The parent company uses powerful systems to ensure that customers get what they expect and a Big Mac tastes about the same whether purchased in New York, Beijing, or Moscow. Cooks are not expected to develop creative new versions of the Big Mac or Quarter Pounder. Creative departures from standard product lines are neither encouraged nor tolerated on a day-to-day basis, though the company has adapted to growth and globalization with a mantra of "freedom within a framework," increasing its receptivity to new ideas from the field. The Big Mac and Egg McMuffin were both created by local franchisees, and burgers-on-wheels home delivery was pioneered in traffic-choked cities like Cairo and Taipei (Arndt, 2007b).

All that structure might sound oppressive, but a major McDonald's miscue in the 1990s resulted from trying to loosen up. Responding to pressure from some frustrated franchisees, McDonald's in 1993 stopped sending out inspectors to grade restaurants on service, food, and ambience. When left to police themselves, some restaurants slipped badly. Customers noticed, and the company's image sagged. Ten years later, a new CEO brought the inspectors back to correct lagging standards (David, 2003).

Year after year, Harvard University appears at or near the top of lists of the world's best universities. Like McDonald's, it has a small administrative group at the top, but in most other respects the two organizations diverge. Even though Harvard is more geographically concentrated than McDonald's, it is significantly more decentralized. Nearly all of Harvard's activities occur within a few square miles of Boston and Cambridge, Massachusetts. Most employees are housed in the university's several schools: Harvard College (the undergraduate school), the graduate faculty of arts and sciences, and various professional schools. Each school has its own dean and its own endowment and, in accordance with Harvard's philosophy of "every tub on its own bottom," largely controls its own destiny. Schools have fiscal autonomy, and individual professors have enormous discretion. They have substantial control over what courses they teach, what research they do, and which university activities they pursue, if any. Faculty meetings are typically sparsely attended. If a dean or a department head wants a faculty member to chair a committee

or offer a new course, the request is more often a humble entreaty than an authoritative command.

The contrast between McDonald's and Harvard is particularly strong at the level of service delivery. Individual personality is not supposed to influence the quality of McDonald's hamburgers, but Harvard courses are the unique creations of individual professors. Two schools might offer courses with the same title but different content and widely divergent teaching styles. Efforts to develop standardized core curricula founder on the autonomy of individual professors.

Structural Differences in the Same Industry

Harvard and McDonald's operate in very different industries, but you will sometimes find very different structures among enterprises operating in a similar business environment. Take Amazon and Zappos.

Both companies are online retailers who ship a variety of goods to customers across America. Both are successful and known for their customer service. We have noted that Amazon gets it done with a tight structure that relies on sophisticated technology, precise measurement, close supervision, and zealous focus on customers, often to the exclusion of employees' satisfaction and welfare.

Contrast this with the Zappos structure, erected on a "culture of happiness" rather than a "culture of metrics." Tony Hsieh, Zappos CEO, is just as focused on the customer as Amazon CEO Jeff Bezos, but he has chosen a very different structure to get there. Structurally, Amazon and Zappos are mirror images of one another. Amazon steers customers toward interaction with its website rather than its employees. Zappos wants highly motivated, happy employees, immersed in an environment of "weirdness and fun," who will create a personal, emotional contact with customers.

Zappos fulfillment operations take place in two large warehouses in Kentucky where goods are received and merchandise is shelved, picked, packed, and shipped. Work is fast paced, intense, and often strenuous. Amazon workers have been known to say they are "treated like a piece of crap" (Soper, 2011, p. 1), but Zappos makes working conditions a primary concern. The warehouses are air-conditioned, and lunch breaks are embellished with free food, video games, and karaoke—the equivalent of adding several dollars to the hourly rate. One employee summed it up: "It's a hot boring job, and we may not get paid top dollar, but with our benefits and free food, it really makes a difference."

In 2013, Hsieh concluded that Zappos was developing too much bureaucracy and proposed a "holocratic" form that eliminated jobs and the organization chart. Managers were replaced by "lead links" of self-managing teams, and individuals were charged to use the "Role Marketplace" (Bernstein et al., 2016, p. 10) to look for work that interested them and needed to be done. The new system turned off some employees, and Zappos lost almost a fifth of its workforce. The transition to holocracy required major investments of time and energy as everyone struggled to figure out how the new system was supposed to work. Things got worse before they got better, as is typical of structural change. But, working

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within the holocracy framework in 2015, Zappos achieved a 75 percent year-over-year increase in profits (Bernstein et al., 2016). The long-term impact on Zappos' free-wheeling culture remains to be seen, but, despite a rocky start, there are signs that this experiment may not be as crazy as it seems.

Zappos and Amazon achieve customer satisfaction through entirely different structural arrangements. What makes the story even more interesting is that Amazon paid over $1 billion to buy Zappos in November 2009. More than a year later, Zappos CEO Tony Hsieh sent a memo to employees saying the culture was still intact, Zappos was still in charge of its own destiny, and business was better than ever (Zappos Blogs, 2011). That was still true five years later in 2016.

Structural Imperatives

Why do McDonald's and Harvard or Zappos and Amazon have such different structures? Is one more effective than the other? Or has each evolved to fit its unique circumstances? In fact, there is no such thing as an ideal structure. Every organization needs to respond to a universal set of internal and external parameters (outlined in Exhibit 3.2). These parameters, or contingencies, include the organization's size, age, core process, environment, strategy and goals, information technology, and workforce characteristics. All these combine to point toward an optimal social architecture.

Exhibit 3.2.
Structural Imperatives.

Dimension	Structural Implications
Size and age	Complexity and formality typically increase with size and age.
Core process	Structure must align with core processes or technologies.
Environment	Stable environment rewards simpler structure; uncertain, turbulent environment requires a more complex, flexible structure.
Strategy and goals	Variation in clarity, suitability, and consistency of strategy requires appropriate structural adaptations.
Information technology	Information technology permits flatter, more flexible, and more decentralized structures.
Nature of the workforce	More educated and professional workers need and want greater autonomy and discretion.

Size and Age

Size and age affect structural shape and character. Problems crop up if growth (or downsizing) occurs without fine-tuning roles and relationships. A small, entrepreneurial organization typically has simple, informal architecture. Growth spawns formality and complexity (Greiner, 1972; Quinn and Cameron, 1983). If carried too far, this leads to the suffocating bureaucratic rigidity often seen in large, mature enterprises.

In the beginning, McDonald's was not the tightly controlled company it is today. It began as a single hamburger stand in San Bernardino, California, owned and managed by the McDonald brothers. They virtually invented the concept of fast food, and their stand was phenomenally successful. The two tried to expand by selling franchise rights, with little success. They were making more than enough money, disliked travel, and had no heirs. If they were richer, said one brother, "we'd be leaving it to a church or something, and we didn't go to church" (Love, 1986, p. 23).

The concept took off when Ray Kroc arrived on the scene. He had achieved modest success selling milk shake machines to restaurants. When many of his customers began to ask for the McDonald's milk shake mixer, he decided to visit the brothers. Seeing the original stand, Kroc realized the potential: "Unlike the homebound McDonalds, Kroc had traveled extensively, and he could envision hundreds of large and small markets where a McDonald's could be located. He understood the existing food services businesses, and understood how a McDonald's unit could be a formidable competitor" (Love, 1986, pp. 39–40). Kroc persuaded the McDonald brothers to let him take over the franchising effort. The rest is history (or Hollywood, which tells its version of this story in the 2016 film, *The Founder*).

Core Process

Structure forms around an organization's basic method of transforming raw materials into finished products. Every organization has at least one core technology that includes raw materials, activities that turn inputs into outputs, and underlying beliefs about the links among inputs, activities, and outcomes (Dornbusch and Scott, 1975).

Core technologies vary in clarity, predictability, and effectiveness. Assembling a Big Mac is relatively routine and programmable. The task is clear, most potential problems are known in advance, and the probability of success is high. Its relatively simple core technology allows McDonald's to rely mostly on vertical coordination.

In contrast, Harvard's two core processes—research and teaching—are far more complex and less predictable. Teaching objectives are knotty and amorphous. Unlike hamburger buns, students are active agents. Which teaching strategies best yield desired

results is more a matter of faith than of fact. Even if students could be molded predictably, mystery surrounds the knowledge and skills they will need to succeed in life. This uncertain technology, greatly dependent on the skills and knowledge of highly educated professionals, is a key source of Harvard's loosely coordinated structure.

Core technologies often evolve, and significant technical innovation calls for corresponding structural alterations (Barley, 1990). In recent decades, struggles to integrate new technologies have become a fateful reality for many firms (Henderson and Clark, 1990; Christensen, 1997). Existing arrangements often get in the way. Companies are tempted to shoehorn innovative technologies into a box that fits their existing operations. As we saw with the decline and fall of Kodak, a change from film to digital photography, slide rules to calculators, or "snail mail" to e-mail gives an advantage to new players less committed to the old ways. In his study of the disk drive industry from 1975 to 1994, Christensen (1997) found that innovation in established firms was often blocked less by technical challenges than by marketers who argued, "Our customers don't want it." By the time the customers did want it, someone else had grabbed the market.

Some organizations are more susceptible than others to outside influences. Public schools, for example, are highly vulnerable to external pressures because they have limited capacity to claim the resources they need or to shape the results they are supposed to produce. In contrast, an institution like Harvard is insulated from such intrusions by its size, elite status, and large endowment. It can afford to offer low teaching loads, generous salaries, and substantial autonomy to its faculty. A Harvard diploma is taken as sufficient evidence that instruction is having its desired effect.

Strategy and Goals

Strategic decisions are future oriented, concerned with long-term direction (Chandler, 1962; Mintzberg, 1994; Roberts, 2004). Across sectors, a major task of organizational leadership is "the determination of long-range goals and objectives of an enterprise, and the adoption of courses of action and allocation of resources necessary for carrying out these goals" (Chandler, p. 13).

A variety of goals are embedded in strategy. In business firms, goals such as profitability, growth, and market share are relatively specific and easy to measure. Goals of educational or human services organizations are typically more diffuse: "producing educated men and women" or "improving individual well-being." This is another reason Harvard adopts a more decentralized, loosely integrated system of roles and relationships.

Historically, McDonald's had fewer, more quantifiable, and less controversial goals than those of Harvard. This aligned well with the centralized, top-down McDonald's structure.

But that structure has become more complex as the company's size and global reach have fostered levels of decentralization that allowed outlets in India to offer vegetarian cuisine and those in France to run ads attacking Americans and American beef (Tagliabue, 1999; Stires, 2002; Arndt, 2007).

Understanding linkages among goals, structure, and strategy requires a look beyond formal statements of purpose. Schools, for example, are often criticized if structure does not coincide with the official goal of scholastic achievement. But schools have other, less visible goals. One is character development, often espoused with little follow-through. Another is the taboo goal of certification and selection, as schools channel students into tracks and sort them into careers. Still a third goal is custody and control—keeping kids off the streets, out from underfoot and temporarily away from the job market. Finally, schools often herald honorific goals such as excellence. Strategy and goals shape structure, but the process is often complex and subtle (Dornbusch and Scott, 1975).

Information Technology

New technologies continue to revolutionize the amount of information available and the speed at which it travels. Once accessible exclusively to top-level or middle managers, information is now easy to get and widely shared. New media have made communication immediate and far reaching. With the press of a key, anyone can reach another person—or an entire network. All this makes it easier to move decisions closer to the action.

In the 2003 invasion of Iraq, for example, U.S. and British forces had an obvious advantage in military hardware. They also had a powerful structural advantage because their superior information technology let them deploy a much more flexible and decentralized command structure. Commanders in the field could change their plans immediately in response to new developments. Iraqi forces, meanwhile, had a much slower, more vertical structure that relied on decisions from the top. A major reason that Iraqi resistance was lighter than expected in the early weeks was that commanders had no idea what to do when they were cut off from their chain of command (Broder and Schmitt, 2003).

Later, however, the structure and technology so effective against Iraq's military had more difficulty with an emerging resistance movement that evolved into a loosely connected structure of entrepreneurial local units that could adapt quickly to U.S. tactics. New technologies like the Internet and cell phones enabled the resistance to structure itself as a network of loosely connected units, each pursuing its own agenda in response to local conditions. The absence of strong central control in such networks can be a virtue because

local units can adapt quickly to new developments and the loss of any one outpost does little damage to the whole.

Nature of the Workforce

Human resource requirements have also changed dramatically in recent decades. Many lower-level jobs now require higher levels of skill. A better-educated workforce expects and often demands more discretion in daily work routines. "Millennials" typically ask for higher salaries and more favorable working conditions than their predecessors. Increasing specialization has professionalized many functions. Professionals typically know more than their supervisors about technical aspects of their work. They expect autonomy and prefer reporting to professional colleagues. Trying to tell a Harvard professor what to teach is an exercise in futility. In contrast, giving too much discretion to a low-skilled McDonald's worker could become a disaster for both employee and customers.

Dramatically different structural forms are emerging as a result of changes in workforce demographics. Deal and Kennedy (1982) predicted early on the emergence of the atomized or network organization, made up of small, autonomous, often geographically dispersed work groups tied together by information systems and organizational symbols. Drucker makes a similar observation in noting that businesses increasingly "move work to where the people are, rather than people to where the work is" (1989, p. 20).

Challenges of Global Organization

In sum, numerous forces affecting structural design create a knotty mix of challenges and tensions. It is not simply a matter of deciding whether we should be centralized like McDonald's or Amazon or decentralized like Harvard or Zappos. Many organizations find that they have to do both and somehow accommodate the competing structural tensions.

Two electronics giants, Panasonic (formerly Matsushita) in Japan and Philips in the Netherlands, have competed with one another around the globe for more than half a century. Historically, Panasonic developed a strong headquarters, while Philips was more decentralized, with strong units in different countries. The pressures of global competition pushed both to become more alike. Philips struggled to gain the efficiencies that come from selling the same products around the world. Meanwhile, as Panasonic gradually discovered, "No company can operate effectively on a global scale by centralizing all key decisions and then farming them out for implementation. It doesn't work . . . No matter how good they are, no matter how well supported analytically, the decision-makers at the center are too far removed from individual markets and the needs of local customers" (Ohmae, 1990, p. 87).

CONCLUSION

The structural frame looks beyond individuals to examine the social architecture of work. Though sometimes equated with red tape, mindless memos, and rigid bureaucrats, the approach is much broader and more subtle. It encompasses the freewheeling, loosely structured entrepreneurial task force as well as the more tightly controlled railway company or postal department. If structure is overlooked, an organization often misdirects energy and resources. It may, for example, waste time and money on massive training programs in a vain effort to solve problems that have much more to do with social architecture than with people's skills or attitudes. It may fire managers and bring in new ones, who then fall victim to the same structural flaws that doomed their predecessors.

At the heart of organizational design are the twin issues of differentiation and integration. Organizations divide work by creating a variety of specialized roles, functions, and units. They must then use both vertical and horizontal procedures to mesh the many elements together. There is no one best way to organize. The right structure depends on prevailing circumstances and considers an organization's goals, strategies, technology, people, and environment. Understanding the complexity and variety of design possibilities can help create formal prototypes that work for, rather than against, both people and collective purposes.

chapter
4

Structure and Restructuring

When society requires to be rebuilt, there is no use in attempting to rebuild it on the old plan.

—John Stuart Mill

In 2004, a crisis over journalistic standards ensnared the British Broadcasting Corporation (BBC) in a flurry of parliamentary hearings, resignations, and public recrimination. The controversy so tarnished the respected institution's reputation that top officials took steps to ensure that it would never happen again.

They initiated a number of structural changes: a journalism board to monitor editorial policy, guidelines on journalistic procedures, forms to flag trouble spots that managers were required to complete, and a 300-page volume of editorial guidelines. The cumulative effect of the changes was a multilayered bureaucracy that limited managerial discretion and fostered a hierarchy of approve-disapprove boxes. These were to be passed up the chain of command as an alternative to probing questions at lower levels in the organization.

Some cures make the patient worse, and this newly restructured system resulted in two crises more damaging than the one in 2004. In October 2012, the BBC came under heavy fire when it became known that it had broadcast a glowing tribute to a well-known former BBC TV host, Jimmy Savile, but killed an investigative report detailing evidence that Savile had been a serial child molester. The following month, the BBC aired a report wrongly accusing a member of Margaret Thatcher's government of being a pedophile.

Reframing Organizations: Artistry, Choice, and Leadership, Sixth Edition. Lee G. Bolman and Terrence E. Deal.

Postmortem investigations attributed both errors directly to BBC's restructured, highly bureaucratized system.

In another case, when Larry Summers, an economist and former treasury secretary, became president of Harvard University in 2001, he soon concluded that the venerable university needed a structural overhaul, and he subsequently issued a series of presidential directives. He attacked the undergraduate grading system, in which half of the students received As and 90 percent graduated with honors. He stiffened standards for awarding tenure, encouraged more foreign study, and directed faculty (especially senior professors) to spend more time with students. He stepped across curricular boundaries to call for an emphasis on educational reform and more interdisciplinary courses. He proposed a center for medicine and science to encourage more applied research. Finally, he announced a bold move to build an additional campus across the Charles River to house new growth and development. Summers's initiatives aimed to tighten Harvard's famously decentralized structure and to imbue the president's office with more clout.

Restructuring worked about as well for Summers as it had for the BBC—he was forced out after serving the shortest term for a Harvard president in more than a century. Reorganizing or restructuring is a powerful but high-risk approach to improvement. Major initiatives to redesign structure and processes often prove neither durable nor beneficial. Designing a structure, putting all the parts in place, and satisfying every interested party is difficult and hazardous. Although restructuring is a manager's strategy of choice to improve performance, a Boston Group Study estimates 50 percent of the efforts fail (BSG, 2012). Other estimates put the misfire rate even higher (HBR, 2000).

But it is also true that, over the past 100 years, management innovations such as decentralization, capital budgeting techniques, and self-governing teams have done more than any other kind of innovation to allow companies to cross new performance thresholds (Hamel, 2006). American automakers scratched their heads for 20 years trying to figure out what made Toyota so successful. They tried all kinds of process innovations but finally reached the conclusion that Toyota had simply given their employees more authority to make decisions and solve problems (Hamel, 2006).

An organization's structure at any moment represents its resolution of an enduring set of basic tensions or dilemmas, which we discuss in opening this chapter. Then, drawing on the work of Henry Mintzberg and Sally Helgesen, we describe two views of the alternatives organizations may consider in aligning structure with mission and environment. We conclude with case examples illustrating both opportunities and challenges that managers encounter when attempting to create more workable and successful structural designs.

STRUCTURAL DILEMMAS

Finding an apt system of authority, roles, and relationships is an ongoing, universal struggle. Managers rarely face well-defined problems with clear-cut solutions. Instead, they confront enduring structural dilemmas, tough trade-offs without easy answers.

Differentiation versus Integration

The tension between assigning work and synchronizing sundry efforts creates a classic dilemma, as seen in Chapter 3. The more complex a role structure (lots of people doing many different things), the harder it is to sustain a focused, tightly coupled enterprise. Recall the challenge facing Larry Summers as he tried to bring a higher level of coordination to a highly decentralized university. As complexity grows, organizations need more sophisticated—and more costly—coordination strategies. Lateral strategies need to supplement top-down rules, policies, and commands.

Gap versus Overlap

If key responsibilities are not clearly assigned, important tasks fall through the cracks. Conversely, roles and activities can overlap, creating conflict, wasted effort, and unintended redundancy. A patient in a prestigious teaching hospital, for example, called her husband and pleaded with him to rescue her. She couldn't sleep at night because hospital staff, especially nurses' aides and interns, kept waking her, often to repeat a procedure or administer a medication that someone else had done a short time before. Conversely, when she wanted something, pressing her nurses' call button rarely produced any response.

The new cabinet-level Department of Homeland Security, created in the wake of the 9/11 terrorist attacks, was intended to reduce gaps and overlaps among the many agencies responsible for responding to domestic threats. Activities incorporated into the new department included immigration, border protection, emergency management, and intelligence analysis. Yet the two most prominent antiterrorism agencies, the FBI and the CIA—with their long history of mutual gaps, overlaps, and bureaucratic squabbling—remained separate and outside the new agency (Firestone, 2002).

Underuse versus Overload

If employees have too little work, they become bored and get in other people's way. Members of the clerical staff in a physician's office were able to complete most of their tasks during the morning. After lunch, they filled their time talking to family and friends. As a result, the office's telephone lines were constantly busy, making it difficult for patients to ask questions and schedule appointments. Meanwhile, clients and routine paperwork swamped

the nurses, who were often brusque and curt because they were so busy. Patients complained about impersonal care. Reassigning many of the nurses' clerical duties to office staff created a better structural balance.

Lack of Clarity versus Lack of Creativity

If employees are unclear about what they are supposed to do, they often tailor their roles to fit personal preferences instead of shaping them to meet system-wide goals. This frequently leads to trouble. Most McDonald's customers are not seeking novelty and surprise in their burgers and fries. But when responsibilities are over-defined, people conform to prescribed roles and protocols in "bureaupathic" ways. They rigidly follow job descriptions, regardless of how much the service or product suffers.

"You lost my bag!" an angry passenger shouted, confronting an airline manager.

The manager responded, "How was the flight?"

"I asked about my bag," said the passenger.

"That's not my job," the manager replied. "Check with baggage claim."

The passenger did not leave as a satisfied customer.

Excessive Autonomy versus Excessive Interdependence

If the efforts of individuals or groups are too autonomous, people often feel isolated. Schoolteachers may feel lonely and unsupported because they work in self-contained classrooms and rarely see other adults. Yet efforts to create closer teamwork have repeatedly run aground because of teachers' difficulties in working together. In contrast, if too tightly connected, people in roles and units are distracted and spend too much time on unnecessary coordination. IBM lost an early lead in the personal computer business in part because new initiatives required so many approvals—from levels and divisions alike—that new products were overdesigned and late to market. The same problem hindered Hewlett-Packard's ability to innovate in the late 1990s.

Too Loose versus Too Tight

One critical structural challenge is how to hold an organization together without holding it back. If structure is too loose, people go astray, with little sense of what others are doing. But rigid structures stifle flexibility and encourage people to waste time trying to beat the system.

We can see some of the perils of a loose structure in the former accounting firm Andersen Worldwide, indicted in 2002 for its role in the Enron scandal. Efforts to shred documents and alter memos at Andersen's Houston office went well beyond questionable accounting procedures. At its Chicago headquarters, Andersen had an internal audit team, the Professional Standards Group, charged with reviewing the work of regional offices.

Unlike other large accounting firms, Andersen let frontline partners closest to the clients overrule the internal audit team. This fostered local discretion that was a selling point to customers but came back to haunt the firm. As a result of the lax controls, "the rainmakers were given the power to overrule the accounting nerds" (McNamee and Borrus, 2002, p. 33).

The opposite problem is common in managed health care. Insurance companies give clerks far from the patient's bedside the authority to approve or deny treatment or to review medical decisions, often frustrating physicians and patients. Doctors lament spending time talking to insurance representatives that would be better spent seeing patients. Insurance providers sometimes deny treatments that physicians see as urgent. In one case, a hospital-based psychologist diagnosed an adolescent as likely to commit sexual assault. The insurer questioned the diagnosis and denied hospitalization. The next day, the teenager raped a five-year-old girl.

Goal-less versus Goal-bound

In some situations, few people know what the goals are; in others, people cling closely to goals long after they have become irrelevant or outmoded. In the 1960s, for example, the Salk vaccine virtually eradicated polio. This medical breakthrough also brought to an end the existing goal of the March of Dimes organization, which for years had championed finding a cure for the crippling disease. The organization rebounded by shifting its strategy to focus on preventing birth defects.

Irresponsible versus Unresponsive

If people abdicate their responsibilities, performance suffers. However, adhering too rigidly to policies or procedures can be equally harmful. In public agencies, "street-level bureaucrats" (Lipsky, 1980) who deal with the public are often asked, "Could you do me this favor?" or "Couldn't you bend the rules a little bit in this case?" Turning down every request, no matter how reasonable, alienates the public and perpetuates images of bureaucratic rigidity and red tape. But agency workers who are too accommodating create problems of inconsistency and favoritism.

STRUCTURAL CONFIGURATIONS

Structural design rarely starts from scratch. Managers search for options among the array of possibilities drawn from their accumulated wisdom and the experiences of others. Templates and frameworks can offer options to stimulate thinking. Henry Mintzberg and Sally Helgesen offer two abstract conceptions of structural possibilities.

Greatest Hits from Organization Studies

Hit Number 7: Michael C. Jensen and William H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," ***Journal of Financial Economics*** **1976, 3, 305–360**

This classic article, seventh on our list of works most often cited by scholars, focuses on two central questions:

- What are the implications of the "agency problem"—that is, the conflicts of interest between principals and their agents?
- Given those conflicts, why do corporations even exist?

An agency relationship is a structural arrangement created whenever one party engages another to perform a task. Jensen and Meckling's particular focus is the relationship between a corporation's owners (shareholders) and their agents, the managers. Principals and agents both seek to maximize utility, but their interests often diverge. If you are a sole proprietor, a dollar of the firm's money is a dollar of yours as well. But if you are an employee with no ownership interest, you're spending someone else's money when you pad your expense account or schedule a business meeting at an expensive resort.

One rationale for linking executive compensation to the price of the company's stock is that it may reduce the agency problem, but the impact is often marginal at best. A notorious example is Tyco's chief executive, Dennis Kozlowski, who reportedly spent more than $30 million of company money to buy, furnish, and decorate his palatial apartment in New York City (Sorkin, 2002). Nonexecutive shareholders hate this kind of thing, but it is difficult for them to stay abreast of everything management does, and they can't do it without incurring "monitoring costs"—time and money spent on things like supervision and auditing.

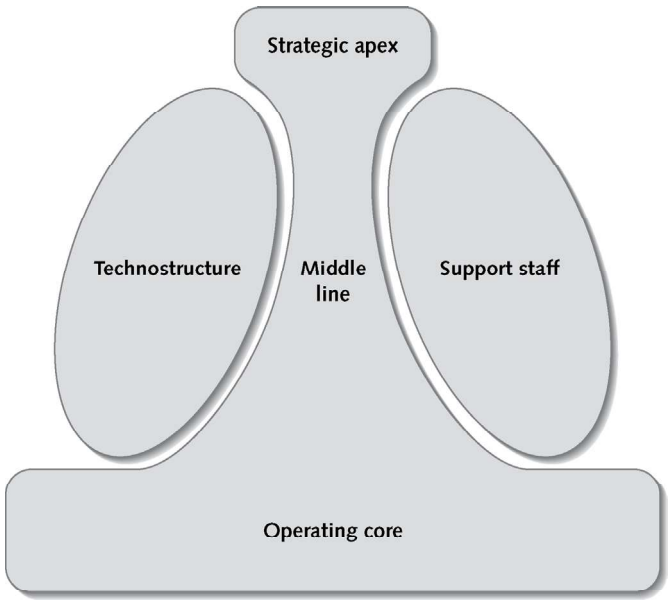
One implication the authors draw is that the primary value of stock analysts is the sentinel function they perform. Analysts' ability to pick stocks is notoriously poor, but their oversight puts more heat on managers to serve shareholder interests. The article also concludes that, despite the agency conflicts, the corporate form still makes economic sense for the parties involved—managers cost more than owners wish, but they still earn their keep.

The authors see the agency problem as a pervasive feature of cooperative activity. The relationship between a team and individual members, or between a boss and a subordinate, is like that between principal and agent. If members of a team share rewards equally, for example, there is an incentive for "free riders" to let someone else do most of the work. Principals face a perennial problem of keeping agents in line and on task.

Mintzberg's Fives

As the two-dimensional lines and boxes of a traditional organization chart have become increasingly archaic, students of organizational design have developed a variety of new structural images. One influential example is Mintzberg's five-sector "logo," depicted in

Exhibit 4.1.
Mintzberg's Model.



Source: Mintzberg (1979, p. 20). Copyright ©1979. Reprinted by permission of Prentice Hall, Upper Saddle River, NJ.

Exhibit 4.1. Mintzberg's model clusters various functions into groupings and shows their relative size and influence in response to different strategies and external challenges. His schema provides a rough atlas of the structural terrain that can help managers get their bearings. It assists in sizing up the lay of the land before assembling a structure that conforms to the prevailing circumstances. One of the distinctive features of Mintzberg's image is expanding the typical two-dimensional view of structure into a more comprehensive portrayal. In doing this, he is able to capture more of the complexity and issues in formal dealings.

At the base of Mintzberg's image is the *operating core,* consisting of workers who produce or provide products or services to customers or clients: teachers in schools, assembly-line workers in factories, physicians and nurses in hospitals, and flight crews in airlines.

Directly above the operating core is the *administrative component:* managers who supervise, coordinate, control, and provide resources for the operators. School principals,

factory supervisors, and echelons of middle management fulfill this role. At the top of Mintzberg's figure, senior managers in the strategic apex track developments in the environment, determine the strategy, and shape the grand design. In school systems, the strategic apex includes superintendents and school boards. In corporations, the apex houses the board of directors and senior executives.

Two more components sit alongside the administrative component. The *technostructure* houses specialists, technicians, and analysts who standardize, measure, and inspect outputs and procedures. Accounting and quality control departments in industry, audit departments in government agencies, and flight standards departments in airlines perform such functions.

The *support staff* performs tasks that support or facilitate the work of others throughout the organization. In schools, for example, the support staff includes nurses, secretaries, custodians, food service workers, and bus drivers. These people often wield influence far greater than their station might suggest.

From this basic blueprint, Mintzberg (1979) derived five structural configurations: simple structure, machine bureaucracy, professional bureaucracy, divisionalized, and adhocracy. Each creates a unique set of management challenges.

Simple Structure

New businesses typically begin as simple structures with only two levels: the strategic apex and an operating level. Coordination is accomplished primarily through direct supervision and oversight, as in a small mom-and-pop operation. Mom or pop constantly monitors what is going on and exercises complete authority over daily operations. William Hewlett and David Packard began their business in a garage, as did Apple Computer's Steve Jobs and Steve Wozniak. Simple structure has the virtues of flexibility and adaptability. One or two people control the operation and can turn on a dime when needed. But virtues can become vices. Authorities can block as well as initiate change, and they can punish capriciously as well as reward handsomely. A boss too close to day-to-day operations is easily distracted by immediate problems, neglecting long-range strategic issues. A notable exception was Panasonic founder Konosuke Matsushita, who promulgated his 250-year plan for the future of the business when his young company still had less than 200 employees.

Machine Bureaucracy

McDonald's is a classic machine bureaucracy. Members of the strategic apex make the big decisions. Managers and standardized procedures govern day-to-day operations. Like other machine bureaucracies, McDonald's has large support staffs and a sizable techno-structure

that sets standards for the cooking time of French fries or the assembly of a Big Mac or Quarter Pounder.

For routine tasks, such as making hamburgers and manufacturing automotive parts, a machine-like operation is both efficient and effective. A key challenge is how to motivate and satisfy workers in the operating core. People quickly tire of repetitive work and standardized procedures. Yet offering too much creativity and personal challenge in, say, a McDonald's outlet could undermine consistency and uniformity—two keys to the company's success.

Like other machine bureaucracies, McDonald's deals constantly with tension between local managers and headquarters. Local concerns and tastes weigh heavily on decisions of middle managers. Top executives, aided by analysts armed with reams of data, rely more on generic and abstract information. Their decisions are influenced by corporation-wide concerns. As a result, a solution from the top may not always match the needs of individual units. Faced with declining sales and market share, McDonald's introduced a new food preparation system in 1998 under the marketing banner "Made for you." CEO Jack Greenberg was convinced the new cook-to-order system would produce the fresher, tastier burgers needed to get the company back on the fast track. However, franchisees soon complained that the new system led to long lines and frustrated customers. Unfazed by the criticism, Greenberg invited a couple of skeptical financial analysts to flip burgers at a McDonald's outlet in New Jersey so they could see firsthand that the concerns were unfounded. The experiment backfired. The analysts agreed with local managers that the system was too slow and decided to pass on the stock (Stires, 2002). The board replaced Greenberg at the end of 2002.

Professional Bureaucracy

Harvard University affords a glimpse into the inner workings of a professional bureaucracy. As in other organizations that employ large numbers of highly educated professionals to perform core activities, Harvard's operating core is large relative to other structural parts, although the technostructure has grown in recent years to accommodate mandated programs such as racial equity or gender sensitivity. At the operating sphere, each individual school, for example, has its own local approach to teaching evaluations; there is no university-wide profile developed by analysts. Few managerial levels exist between the strategic apex and the professors, creating a flat and decentralized profile.

Control relies heavily on professional training and indoctrination. Insulated from formal interference, professors have almost unlimited academic freedom to apply their expertise as they choose. Freeing highly trained experts to do what they do best produces many benefits

but leads to challenges of coordination and quality control. Tenured professors, for example, are largely immune from formal sanctions. As a result, universities have to find other ways to deal with incompetence and irresponsibility. Faced with a professor whose teaching performance was moving from erratic to bizarre, a Harvard dean did the one thing he felt he could do—he relieved the professor of teaching responsibilities while continuing to pay his full salary. The dean was not very disappointed when the professor quit in anger (Rosovsky, 1990).

A professional bureaucracy responds slowly to external change. Waves of reform typically produce little impact because professionals often view any change in their surroundings as an annoying distraction. The result is a paradox: Individual professionals may strive to be at the forefront of their specialty, whereas the institution as a whole changes at a glacial pace. Professional bureaucracies regularly stumble when they try to exercise greater control over the operating core; requiring Harvard professors to follow standard teaching methods might do more harm than good.

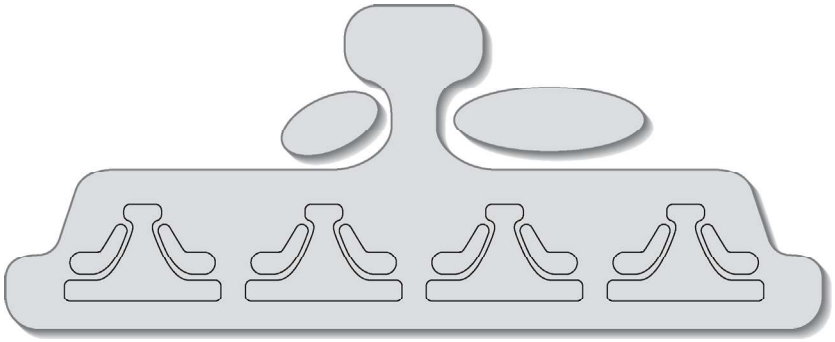
Harvard president Larry Summers tripped over this challenge in a famous case when he suggested that superstar African American studies professor Cornel West redirect his scholarly efforts. Summers gave his advice to West in private, but West's pique made the front page of the *New York Times* (Belluck and Steinberg, 2002). Summers's profuse public apologies failed to deter the offended professor from decamping to Princeton, where he stayed for 14 years before returning to Harvard in 2016. In professional bureaucracies, professionals often win struggles between the strategic apex and the operating core. Hospital administrators learn this lesson quickly, and often painfully, in their dealings with physicians.

Divisionalized Form

In a divisionalized organization (see Exhibit 4.2), the bulk of the work is done in quasiautonomous units, such as freestanding campuses in a multi-campus university, areas of expertise in a large multispecialty hospital, or independent business units in a Fortune 500 firm (Mintzberg, 1979). Johnson and Johnson, for example, is among the largest companies in the world (#39 on the Fortune 500 in 2016). It has 250 operating companies lodged in virtually every country. Its medical device division is the world's largest. Its pharmaceutical division is even bigger. Its consumer products division produces a wide assortment of well-known brands, such as Neutrogena, Tylenol, Band-Aids, and Rogaine. It also makes contact lenses and tuberculosis medicines.

Although J&J's divisions often have little in common, the company's executives argue that there is a level of shared synergy and stability that have paid off over time. Despite

Exhibit 4.2.
Divisionalized Form.



Source: Mintzberg (1979, p. 393). Copyright © 1979. Reprinted by permission of Pearson Education, Inc., New York, New York.

setbacks in the Tylenol crisis of 1982 and a series of product recalls in 2010 and 2012, J&J had raised its dividend for 53 consecutive years and was one of only two U.S. companies with an AAA credit rating.

One of the oldest businesses in the United States, Berwind Corporation began in coal-mining in 1886. It now houses divisions in business sectors as diverse as manufacturing, financial services, real estate, and land management. Each division serves a distinct market and supports its own functional units. Division presidents are accountable to the corporate office in Philadelphia for specific results: profits, sales growth, and return on investment. As long as they deliver, divisions have relatively free rein. Philadelphia manages the strategic portfolio and allocates resources based on its assessment of market opportunities.

Divisionalized structure offers economies of scale, resources, and responsiveness while controlling economic risks, but it creates other tensions. One is a cat-and-mouse game between headquarters and divisions. Headquarters wants oversight, while divisional managers try to evade corporate control:

> Our top management likes to make all the major decisions. They think they do, but I've seen one case where a division beat them. I received . . . a request from the division for a chimney. I couldn't see what anyone would do with a chimney . . .

> [But] they've built and equipped a whole plant on plant expense orders. The chimney is the only indivisible item that exceeded the $50,000 limit we put on plant expense orders. Apparently they learned that a new plant wouldn't be formally received, so they built the damn thing (Bower, 1970, p. 189).

Another risk in the divisionalized form is that headquarters may lose touch with operations. As one manager put it, "Headquarters is where the rubber meets the air." Divisionalized enterprises become unwieldy unless goals are measurable and reliable information systems are in place (Mintzberg, 1979).

Adhocracy

Adhocracy is a loose, flexible, self-renewing organic form tied together primarily through lateral means. Usually found in a diverse, freewheeling environment, adhocracy functions as an "organizational tent," exploiting benefits that structural designers traditionally regarded as liabilities: "Ambiguous authority structures, unclear objectives, and contradictory assignments of responsibility can legitimize controversies and challenge traditions. Incoherence and indecision can foster exploration, self-evaluation, and learning" (Hedberg, Nystrom, and Starbuck, 1976, p. 45). Inconsistencies and contradictions in an adhocracy become paradoxes whereby a balance between opposites protects an organization from falling into an either-or trap.

Ad hoc structures thrive in conditions of turbulence and rapid change. Examples are advertising agencies, think-tank consulting firms, and the recording industry. A successful and durable example of an adhocracy is W. L. Gore, producer of Gore-Tex, vascular stents, dental floss, and many other products based on its pioneering development of advanced polymer materials. When he founded the company in 1958, Bill Gore conceived it as an organization where "there would be no layers of management, information would flow freely in all directions, and personal communications would be the norm. And individuals and self-managed teams would go directly to anyone in the organization to get what they needed to be successful" (Hamel, 2010).

Half a century later, Gore has more than 10,000 employees (Gore calls them "associates") and some $3 billion in annual sales but still adheres to Bill Gore's principles. In Gore's "lattice" structure, people don't have bosses. Instead, the company relies on "natural leaders"—individuals who can attract talent, build teams, and get things done. One test: If you call a meeting and no one comes, you're probably not a leader. When Gore's CEO retired in 2005, the board polled associates to find out whom they would be willing to follow. They weren't given a slate—they could nominate anyone. No one was more surprised than Terri Kelly when she became the people's choice. She acknowledges that Gore's approach

carries a continuing risk of chaos. It helps, she says, that the culture has clear norms and values, but "Our leaders have to do an incredible job of internal selling to get the organization to move. The process is sometimes frustrating, but we believe that if you spend more time up front, you'll have associates who are not only fully bought-in, but committed to achieving the outcome. Along the way, they'll also help to refine the idea and make the decision better" (Hamel, 2010).

Helgesen's Web of Inclusion

Mintzberg's five-sector imagery adds a new dimension to the conventional line-staff organization chart but retains some of the traditional image of structure as a top-down pyramid. Helgesen argues that the idea of hierarchy is primarily a male-driven depiction, quite different from structures created by female executives:

> The women I studied had built profoundly integrated and organic organizations in which the focus was on nurturing good relationships; in which the niceties of hierarchical rank and distinction played little part; and in which lines of communication were multiplicitous, open, and diffuse. I noted that women tended to put themselves at the center of their organizations rather than at the top, thus emphasizing both accessibility and equality, and that they labored constantly to include people in their decision making (Helgesen, 1995, p. 10).

Helgesen coined the expression "web of inclusion" to depict an organic social architectural form more circular than hierarchical. The web builds from the center out. Its architect works much like a spider, spinning new threads of connection and reinforcing existing strands. The web's center and periphery are interconnected; action in one place ripples across the entire configuration, forming "an interconnected cosmic web in which the threads of all forces and events form an inseparable net of endlessly, mutually conditioned relations" (Fritjof Capra, quoted in Helgesen, 1995, p. 16). Consequently, weaknesses in either the center or the periphery of the web undermine the strength of the natural network.

A famous example of web organization is "Linux, Inc.," the loose organization of individuals and organizations that has formed around Linus Torvalds, the creator of the open-source operating system Linux, whose many variants power most of the world's supercomputers, cell phones, stock markets, and Web domains. "Linux, Inc." is anything but a traditional company: "There's no headquarters, no CEO, and no annual report. It's not a single company, but a cooperative venture. More than 13,000 developers from more than 1,300 companies along with thousands of individual volunteers have contributed to the

Linux code. The Linux community, Torvalds says, is like a huge spider web, or better yet, multiple spider webs representing dozens of related open-source projects. His office is 'near where those webs intersect'" (Hamm, 2005).

Freewheeling web or lattice structures may encounter increasing challenges as an organization gets bigger. When Meg Whitman became CEO of Internet phenomenon eBay in 1998, she joined an organization of fewer than 50 employees configured in an informal web around founder Pierre Omidyar. When she tried to set up appointments with her new staff, she was surprised to learn that scheduled meetings were a foreign concept in a company where no one kept a calendar. Omidyar had built a company with a strong culture and powerful sense of community but no explicit strategy, no regular meetings, no marketing department, and almost no other identifiable structural elements. Despite the company's phenomenal growth and profitability, Whitman concluded that it was in danger of imploding without more structure and discipline. Omidyar agreed. He had worked hard to recruit Whitman because he believed she brought the big-company management experience that eBay needed to keep growing (Hill and Farkas, 2000).

GENERIC ISSUES IN RESTRUCTURING

Eventually, internal or external changes force every structure to adjust, but structural change is rarely easy, When the Roman Catholic Church elevated a new pope, Francis, in March, 2013, many hoped that he would represent a breath of fresh air after the troubled reign of his predecessor. But a well-placed insider noted how difficult this would be, even for a supposedly absolute ruler: "There have been a number of Popes in succession with different personalities, but the structure remains the same. Whoever is appointed, they get absorbed by the structure. Instead of you transforming the structure, the structure transforms you" (Donadio and Yardley, 2013).

When the time for restructuring comes, managers need to take account of tensions specific to each structural configuration. Consultants and managers often apply general principles and specific answers without recognizing key differences across architectural forms. Reshaping an adhocracy, for example, is different from restructuring a machine bureaucracy, and reweaving a web is very different from nudging a professional bureaucracy. Falling victim to the one-best-system or one-size-fits-all mentality is a route to disaster. But the comfort of a well-defined prescription lulls too many managers into a temporary comfort zone. They don't see the iceberg looming ahead until they crash into it.

Mintzberg's depiction suggests general principles to guide restructuring across a range of circumstances. Each major component of his model exerts its own pressures. Restructuring

triggers a multidirectional tug-of-war that eventually determines the shape of the emerging configuration. The result may be a catastrophe unless leaders acknowledge and manage various pushes and pulls.

The strategic apex—top management—tends to exert centralizing pressures. Through commands, rules, or less obtrusive means, top managers continually try to develop a unified mission or strategy. Deep down, they long for a simple structure they can control. By contrast, middle managers resist control from the top and tend to pull the organization toward balkanization. Navy captains, school principals, plant managers, department heads, and bureau chiefs become committed to their own domain and seek to protect and enhance their unit's parochial interests. Tensions between centripetal forces from the top and centrifugal forces from middle management are especially prominent in divisional structures but are critical issues in any restructuring effort.

The technostructure exerts pressures to standardize; analysts want to measure and monitor the organization's progress against well-defined criteria. Depending on the circumstances, they counterbalance (or complement) top administrators, who want to centralize, and middle managers, who seek greater autonomy. A college professor who wants to use a Web-based simulation game, for example, may find that it takes weeks or months to negotiate the rules and procedures that the university's information technology units have put in place. Issues that seem critical to IT may seem like trivial annoyances to the professor and vice-versa. Technocrats feel most at home in a machine bureaucracy.

The support staff pulls in the direction of greater collaboration. Its members usually feel happiest when authority is dispersed to small work units. There they can influence, directly and personally, the shape and flow of everyday work and decisions. In one university, a new president created a new governance structure that, for the first time, included support staff along with faculty and administrators. The staff loved it, but when they came up with a proposal for improvements to the promotion and tenure process, the faculty was not amused. Meanwhile, the operating core seeks to control its own destiny and minimize influence from the other components. Its members often look outside—to a union or to their professional colleagues—for support.

Attempts to restructure must acknowledge the natural tensions among these competing interests. Depending on the configuration, any component may have more or less influence on the final outcome. In a simple structure, the boss has the edge. In machine bureaucracies, the techno structure and strategic apex possess the most clout. In professional bureaucracies, chronic conflict between administrators and professionals is the dominant tension, while members of the techno structure play an important role in the wings. In the adhocracy, a variety of actors can play a pivotal role in shaping the emerging structural patterns.

Beyond internal negotiations a more crucial issue lurks. A structure's effectiveness ultimately depends on its fit with the organization's strategy, environment, and technology. Natural selection weeds out the field, determining survivors and victims. The major players must negotiate a structure that meets the needs of each component and still enables the organization to survive, if not thrive.

Why Restructure?

Restructuring is a challenging process that consumes time and resources with no guarantee of success, as the BBC and Harvard cases at the beginning of the chapter illustrate. Organizations typically embark on that path when they feel compelled to respond to major problems or opportunities. Various pressures can lead to that conclusion:

- *The environment shifts.* At American Telephone & Telegraph, once the telephone company for most of the United States, a mandated shift from regulated monopoly to a market with multiple competitors required a massive reorganization of the Bell System that played out over decades. When AT&T split off its local telephone companies into regional "Baby Bells," few anticipated that eventually one of the children (Southwest Bell) would swallow up the parent and appropriate its identity.
- *Technology changes.* The aircraft industry's shift from piston to jet engines profoundly affected the relationship between engine and airframe. Some established firms faltered because they underestimated the complexities; Boeing rose to lead the industry because it understood the issues (Henderson and Clark, 1990).
- *Organizations grow.* Digital Equipment thrived with a very informal and flexible structure during the company's early years, but the same structure produced major problems when it grew into a multibillion-dollar corporation.
- *Leadership changes.* Reorganization is often the first initiative of new leaders. It is a way for them to try to put their stamp on the organization, even if no one else sees a need to restructure.

Miller and Friesen (1984) studied a sample of successful as well as troubled firms undergoing structural change and found that those in trouble typically fell into one of three configurations:

- *The impulsive firm:* A fast-growing organization, controlled by one individual or a few top people, in which structure and controls have become too primitive and the firm is increasingly out of control. Profits may fall precipitously, and survival may be at stake.

Many once-successful entrepreneurial organizations stumble at this stage because they have failed to evolve beyond their simple structure.

- *The stagnant bureaucracy:* An older, tradition-dominated organization with an obsolete product line. A predictable and placid environment has lulled everyone to sleep, and top management is slavishly committed to old ways. Management thinking is too rigid or information systems are too primitive to detect the need for change, and lower-level managers feel ignored and alienated. Many old-line corporations and public agencies fit into this group of faltering machine bureaucracies.
- *The headless giant:* A loosely coupled, divisional organization that has turned into a collection of feudal baronies. The strategic apex is weak, and most of the initiative and power resides in autonomous divisions. With little strategy or leadership at the top, the firm is adrift. Collaboration is minimal because departments compete for resources. Decision making is reactive and crisis-oriented. WorldCom is an example of how bad things can get in this situation. CEO Bernie Ebbers built the company rapidly from a tiny start-up in Mississippi to a global telecommunications giant through some 65 acquisitions. But "for all its talent in buying competitors, the company was not up to the task of merging them. Dozens of conflicting computer systems remained, local network systems were repetitive and failed to work together properly, and billing systems were not coordinated. 'Don't think of WorldCom the way you would of other corporations,' said one person who has worked with the company at a high level for many years. 'It's not a company, it's just a bunch of disparate pieces. It's simply dysfunctional'" (Eichenwald, 2002, p. C-6).

Miller and Friesen (1984) found that even in troubled organizations, structural change is episodic: Long periods of little change are followed by brief episodes of major restructuring. Organizations are reluctant to make major changes because a stable structure reduces confusion and uncertainty, maintains internal consistency, and protects the existing equilibrium. The price of stability is a structure that grows increasingly misaligned with the environment. Eventually, the gap gets so big that a major overhaul is inevitable. Restructuring, in this view, is like spring cleaning: We accumulate debris over months or years until we are finally forced to face up to the mess.

Making Restructuring Work: Three Case Examples

In this section, we look at three case examples of restructuring. Some represent examples of reengineering, which rose to prominence in the 1990s as an umbrella concept for emerging trends in structural thinking. Hammer and Champy promised a revolution in how

organizations were structured: "When a process is reengineered, jobs evolve from narrow and task oriented to multidimensional. People who once did as they were instructed now make choices and decisions on their own instead. Assembly-line work disappears. Functional departments lose their reason for being. Managers stop acting like supervisors and behave more like coaches. Workers focus more on customers' needs and less on their bosses' whims. Attitudes and values change in response to new incentives. Practically every aspect of the organization is transformed, often beyond recognition" (1993, p. 65).

More than half of all Fortune 500 companies jumped on the reengineering bandwagon in the mid-1990s, but only about a third of those efforts were successful. Champy admitted in a follow-up book, *Reengineering Management* (1995), that reengineering was in trouble, and attributed the shortfall to flaws in senior management thinking.

Some reengineering initiatives have indeed been catastrophic, a notorious example being the long-haul bus company Greyhound Lines. As the company came out of bankruptcy in the early 1990s, a new management team announced a major reorganization, with sizable cuts in staffing and routes and development of a new, computerized reservation system. The initiative played well on Wall Street, where the company's stock soared, but poorly on Main Street as customer service and the new reservations system collapsed. Rushed, underfunded, and insensitive to both employees and customers, it was a textbook example of how not to restructure. Eventually, Greyhound's stock crashed, and management was forced out. One observer noted wryly, "They reengineered that business to hell" (Tomsho, 1994, p. A1). Across many organizations, reengineering was a cover for downsizing the workforce, often with disappointing results.

Nevertheless, despite the many disasters, there have also been examples of notable restructuring success. Here we discuss three of them, drawn from different eras and industries.

Citibank's Back Room

The "back room" at Citibank—charged with processing checks and other financial instruments—was in trouble when John Reed took charge in 1970 (Seeger, Lorsch, and Gibson, 1975). Productivity was down, errors were frequent, and expenses were rising almost 20 percent every year. Reed soon determined that the area needed dramatic structural change. Traditionally, the department was a service for the bank's customer-contact offices, structured as a machine bureaucracy. Reed decided to think of it as an independent factory—a free-standing, high-volume production facility. He imported high-level executives from the automobile industry. One was Robert White, who came from Ford to become the primary architect of the new structure for the back room.

White began by cutting costs, putting in new computer systems, and developing a financial control system to forecast and measure performance. In effect, the strategy tightened the machine bureaucracy. Later on, White concluded that "we hadn't gone back to the basics enough. We found that we did not really understand the present processes completely" (Seeger, Lorsch, and Gibson, 1975, p. 8).

They embarked on a detailed study of how the back room's processes worked and developed a detailed flowchart. This helped them realize that the current structure was, in effect, one very large functional pipeline. Everything flowed into "preprocessing" at the front end of the pipe, then to "encoding," and on through a series of functional areas until it eventually came out at the other end. Reed and White decided to break the pipe into several smaller lines, each carrying a different "product" and supervised by a single manager with responsibility for an end-to-end process. The key insight was to change the structure from machine bureaucracy to a divisionalized form. Along with the change, White instituted extensive performance measures and tight accountability procedures—69 quality indicators and 129 different standards for time lines.

As Mintzberg's model predicts, the operating core strongly resisted this intrusion. Reed and White implemented the new structure virtually overnight, and the short-term result was chaos and a major breakdown in the system. It took two weeks to get things working again, and five months to recover from the problems generated by the transition. Once past that crisis, the new system dramatically improved operating results: Production was up; costs and errors were down. The back room became a major source of competitive advantage.

The Citibank restructuring was strongly driven from the top down and focused primarily on internal efficiencies. This has been true of many, but by no means all, restructuring efforts.

Beth Israel Hospital

Boston's Beth Israel Hospital illustrates a health care restructuring effort that sought to move toward greater autonomy and teamwork. When Joyce Clifford became Beth Israel's director of nursing, she found a top-down pyramid common in many hospitals:

> The nursing aides, who had the least preparation, had the most contact with the patients. But they had no authority of any kind. They had to go to their supervisor to ask if a patient could have an aspirin. The supervisor would then ask the head nurse, who would then ask a doctor. The doctor would ask how long the patient had been in pain. Of course, the head nurse had absolutely no idea, so she'd have to track down the aide to ask her, and then relay that information back to the doctor. It was ridiculous, a ludicrous and dissatisfying situation, and one in which it was impossible for the nurse to feel any satisfaction at all. The system was hierarchical, fragmented, impersonal, and [overmanaged] (Helgesen, 1995, p. 134).

(*continued*)

(*continued*)

Within units, responsibilities of nurses were highly specialized: some were assigned to handling medications, others to monitoring vital signs, still others to taking blood pressure readings. Add to the list specialized housekeeping roles—bedpan, bed making, and food services. A patient received repeated interruptions from virtual strangers. No one really knew what was going on with any individual patient.

Clifford instituted a major structural revamp, changing a pyramid with nurses at the bottom to an inclusive web with nurses at the center. The concept, called primary nursing, places each patient in the charge of a primary nurse. The nurse takes information upon admission, develops a comprehensive care plan, assembles a team to provide round-the-clock care, and lets the family know what to expect. A nurse manager sets goals for the unit, deals with budget and administrative matters, and makes sure that primary nurses have ample resources to provide quality care.

As the primary nurses assumed more responsibility, connections with physicians and other hospital workers needed reworking. Instead of simply carrying out physicians' orders, primary nurses became professional partners, attending rounds and participating as equals in treatment decisions. Housekeepers reported to primary nurses rather than to housekeeping supervisors. Housekeepers assigned to specific patients made the patient's bed, attended to the patient's hygiene, and delivered food trays. Laundry workers brought in clean items on demand rather than making a once-a-day delivery. Sophisticated technology gave all personnel easy access to patient information and administrative data.

Primary nurses learned from performing a variety of heretofore menial tasks. Bed making, for example, became an opportunity to evaluate a patient's condition and assess how well a treatment plan was working. Joyce Clifford's role also transformed, from top-down supervisor to web-centered coordinator:

> A big part of my job is to keep nurses informed on a regular basis of what's going on out there—what the board is doing, what decisions are confronting the hospital as a whole, what the issues are in health care in this country. I also let them know that I'm trying to represent what the nurses here are doing—to our vice-presidents, to our board, and people in the outside world . . . to the nursing profession and the health care field as a whole (Helgesen, 1995, p. 158).

Beth Israel's primary nursing concept, initiated in the mid-1970s, produced significant improvement in both patient care and nursing morale. Nursing turnover declined dramatically (Springarn, 1982), and the model's success made it highly influential and widely copied both in the United States and abroad. But even successful change won't work forever. Over the years, changes in the health care system put Beth Israel's model under increasing pressure. More patients with more problems but shorter hospital stays made nurses' jobs much harder at the same time that cost pressures forced reductions in nursing staff. Beth Israel chose to update its approach by creating interdisciplinary "care teams." Instead of assembling an ad hoc collection of care providers for each new patient, ongoing teams of nurses, physicians, and support staff provided interdisciplinary support to primary nurses (Rundall, Starkweather, and Norrish, 1998).

Ford Motor Company

In 2006, after Ford Motor Company chalked up a $13 billion loss, Chairman William Ford III concluded that the way to save the company his great-grandfather had founded was to hire a strong and experienced outsider who could take on the entrenched mind-sets and infighting among executives and divisions at Ford. He took a gamble on a noncar guy, Alan Mulally, an engineer with a long career at Boeing and a reputation for turning around struggling businesses.

Arriving at Ford, Mulally encountered many surprises. Bureaucracy was so entrenched and top-down that it was considered bad form for a subordinate to invite a superior to lunch. Ford was struggling, but no one wanted to admit it, so executives brought thick books of minutiae to meetings, using a flurry of details to obfuscate problems or shift blame to someone else. They resorted to doublespeak to avoid admitting that they didn't know the answers to questions.

Mulally soon concluded that Ford needed a major overhaul of a "convoluted management structure riddled with overlapping responsibilities and tangled chains of command" (Hoffman, 2012, p. 142). He flattened the hierarchy, cut out two layers of senior management, and increased his number of direct reports. He sold off secondary brands like Volvo and Land Rover and streamlined Ford's product line to aim for fewer models with higher quality. He implemented what had worked at Boeing: a matrix structure that crisscrossed the already-strong regional organizations with upgraded global functional units. So, for example, the head of communications or purchasing in Ford Europe would report to both the regional president in Europe and to a corporate vice-president back at headquarters in the United States.

Mulally believed this structure would bring the balance Ford needed: "It made each business unit fully accountable, but also made sure that each key function, from purchasing to product development, was managed globally in order to maximize efficiencies and economies of scale" (Hoffman, 2012, p. 143). He emphasized teamwork, collaboration across divisions, and an end to blaming, hiding mistakes, and hoarding cost figures. Division presidents were instructed to act as one company, not as airtight silos.

It worked. After losing market share for 13 straight years, Ford gained share in 2009, turned a profit in 2010, and achieved its highest profits in more than a decade in 2011. Mulally turned 65 in 2011 amid speculation about when he would retire. Board chair William Ford III expressed the hope that he would stay forever, but Mulally chose to retire two years later in 2014.

Principles of Successful Structural Change

Too many efforts to change structure fail. The Citibank, Beth Israel, and Ford Motor Company initiatives succeeded by following several basic principles of successful structural change:

- They did the hard work of carefully studying the existing structure and process so that they fully understood how things worked—and what wasn't working. (Many efforts at structural change fail because they start from an inadequate picture of current roles, relationships, and processes.)

- The change architects developed a new conception of the organization's goals and strategies attuned to the challenges and circumstances of the time.
- They designed the new structure in response to changes in strategy, technology, and environment.
- Finally, they experimented as they moved along, retaining things that worked and discarding those that did not.

CONCLUSION

At any given moment, an organization's structure represents its best effort to align internal activities with outside pressures and opportunities. Managers work to juggle and resolve enduring organizational dilemmas: Are we too loose or too tight? Are employees underworked or overwhelmed? Are we too rigid, or do we lack standards? Do people spend too much or too little time harmonizing with one another? Structure represents a resolution of contending claims from various groups.

Mintzberg differentiates five major components in organizational structure: strategic apex, middle management, operating core, techno structure, and support staff. These components configure in unique designs: machine bureaucracy, professional bureaucracy, simple structure, divisionalized form, and adhocracy. Helgesen adds a less hierarchical model, the web of inclusion.

Changes, whether driven from inside or outside, eventually require some form of structural adaptation. Restructuring is a sensible but high-risk move. In the short term, structural change invariably produces confusion and resistance; things get worse before they get better. In the end, success depends on how well the new model aligns with environment, task, and technology. It also hinges on the route taken in putting the new structure in place. Effective restructuring requires both a fine-grained, microscopic assessment of typical problems and an overall, topographical sense of structural options.