22

The Five Basic Parts of the Organization

Henry Mintzberg

[Previously] organizations were described in terms of their use of the coordinating mechanisms. We noted that, in theory, the simplest organization can rely on mutual adjustment to coordinate its basic work of producing a product or service. Its *operators*—those who do this basic work—are largely self-sufficient.

As the organization grows, however, and adopts a more complex division of labor among its operators, the need is increasingly felt for direct supervision. Another brain—that of a *manager*—is needed to help coordinate the work of the operators. So, whereas the division of labor up to this point has been between the operators themselves, the introduction of a manager introduces a first *administrative* division of labor in the structure—between those who do the work and those who supervise it. And as the organization further elaborates itself, more managers are added—not only managers of operators but also managers of managers. An administrative *hierarchy* of authority is built.

As the process of elaboration continues, the organization turns increasingly to standardization as a means of coordinating the work of its operators. The responsibility for much of this standardization falls on a third group, composed of *analysts*. Some, such as work study analysts and industrial engineers, concern themselves with the standardization of work processes; others, such as quality control engineers, accountants, planners, and production schedulers, focus on the standardization of outputs; while a few, such as personnel trainers, are charged with the standardization of skills (although most of this standardization takes place outside the organization, before the operators are hired). The introduction of these analysts brings a second kind of administrative division of labor to the organization, between those who do and who supervise the work, and those who standardize it. Whereas in the first case managers assume responsibility from the operators for some of the coordination of their work by substituting direct supervision for mutual adjustment, the analysts assumed responsibility from the managers (and the operators) by substituting standardization for direct supervision (and mutual adjustment). Earlier, some of the control over the work was removed from the operator; now it begins to be removed from the manager as well, as the systems designed by the analysts take increasing responsibility for coordination. The analyst "institutionalizes" the manager's job.

We end up with an organization that consists of a core of operators, who do the basic work of producing the products and services, and an *administrative* component of managers and analysts, who take some of the responsibility for coordinating their work. This leads us to the conceptual description of the organization shown in Figure 22.1. This figure will be used repeatedly throughout the book, sometimes overlaid to show flows, sometimes distorted to illustrate special structures. It emerges, in effect, as the "logo," or symbol, of the book.

At the base of the logo is the *operating* core, wherein the operators carry out the basic work of the organization—the input, processing, output, and direct support tasks

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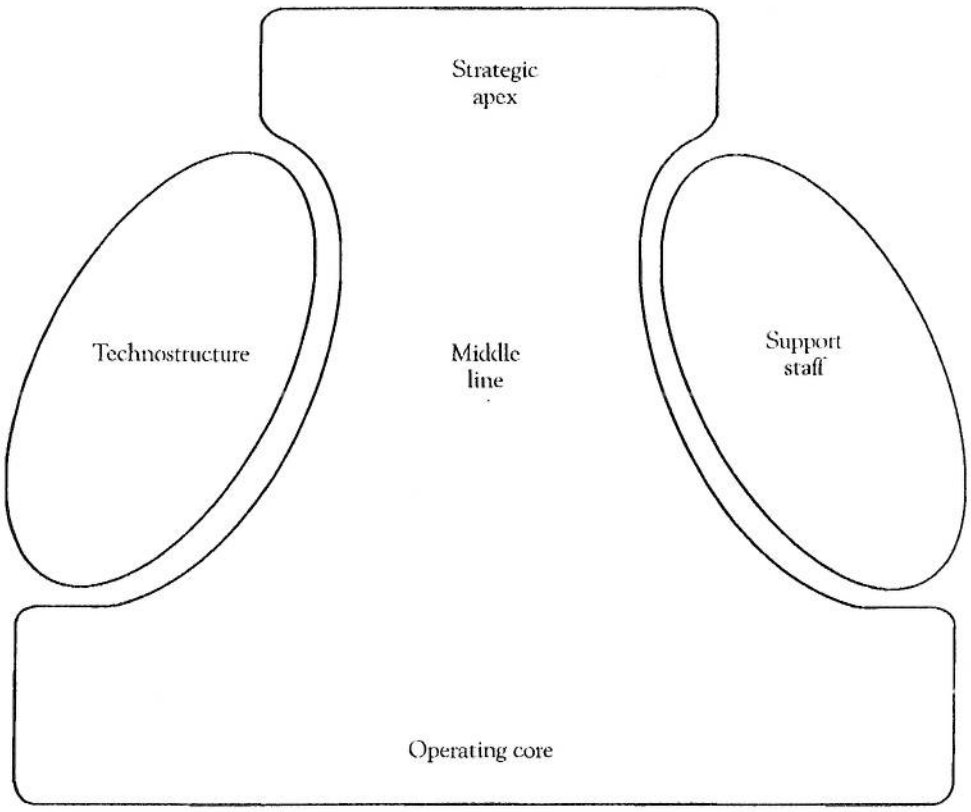
FIGURE 22.1 • THE FIVE BASIC PARTS OF ORGANIZATIONS



associated with producing the products or services. Above them sits the administrative component, which is shown in three parts. First, are the managers, divided into two groups. Those at the very top of the hierarchy, together with their own personal staff, form the *strategic apex*. And those below, who join the strategic apex to the operating core through the chain of command (such as it exists), make up the *middle line*. To their left stands the *technostructure*, wherein the analysts carry out their work of standardizing the work of others, in addition to applying their analytical techniques to help the organization adapt to its environment. Finally, we add a fifth group, the *support staff*, shown to the right of the middle line. This staff supports the functioning of the operating core indirectly, that is, outside the basic flow of operating work. The support staff goes largely unrecognized in the literature of organizational structuring, yet a quick glance at the chart of virtually any large organization indicates that it is a major segment, one that should not be confused with the other four. Examples of support groups in a typical manufacturing firm are research and development, cafeteria, legal council, payroll, public relations, and mailroom.

Figure 22.1 shows a small strategic apex connected by a flaring middle line to a large, flat operating core. These three parts of the organization are shown in one uninterrupted sequence to indicate that they are typically connected through a single line of formal authority. The technostructure and the support staff are shown off to either side to indicate that they are separate from this

main line of authority, and influence the operating core only indirectly.

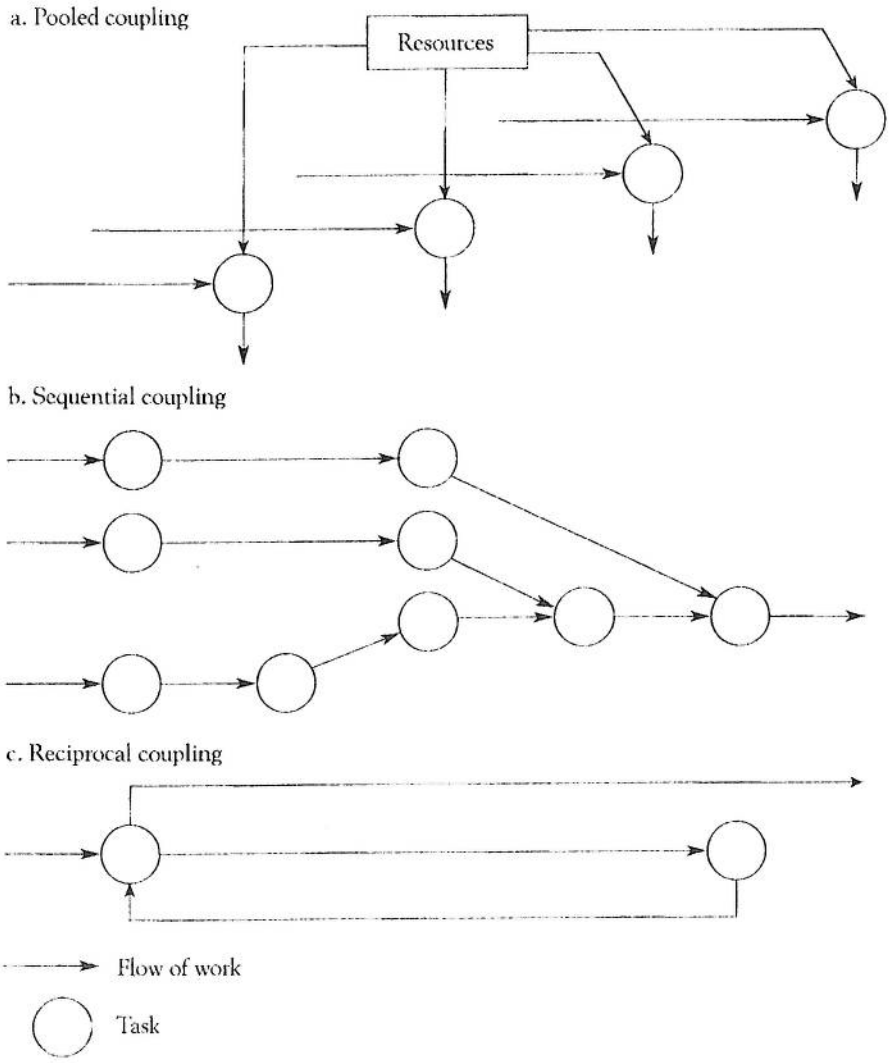
It might be useful at this point to relate this scheme to some terms commonly used in organizations. The term "middle management," although seldom carefully defined, generally seems to include all members of the organization not at the strategic apex or in the operating core. In our scheme, therefore, "middle management" would comprise three distinct groups—the middle-line managers, the analysts, and the support staff. To avoid confusion, however, the term *middle level* will be used here to describe these three groups together, the term "management" being reserved for the managers of the strategic apex and the middle line.

The word "staff" should also be put into this context. In the early literature, the term was used in contrast to "line": in theory, line positions had formal authority to make decisions, while staff positions did not; they merely advised those who did. (This has sometimes been referred to as "functional" authority, in contrast to the line's formal or "hierarchical" authority.) Allen (1955), for example, delineates the staff's major activities as (1) providing advice, counsel, suggestions, and guidance on planning objectives, policies, and procedures to govern the operations of the line departments on how best to put decisions into practice; and (2) performing specific service activities for the line, for example, installing budgeting systems and recruiting line personnel, "which may include making decisions that the line has asked it to make" (p. 348). As we shall see later, this distinction between line and staff holds up in some kinds of structures and breaks down in others. Nevertheless, the distinction between line and staff is of some use to us, and we shall retain the terms here though in somewhat modified form. *Staff* will be used to refer to the technostructure *and* the support staff, those groups shown on either side in Figure 22.1. *Line* will refer to the central part of Figure 22.1, those managers in the flow of does not mention the power to decide or advise. As we shall see, the support staff does not primarily advise; it has distinct functions to perform and decisions to make, although these relate only indirectly to the functions of the operating core. The chef in the plant cafeteria may be engaged in a production process, but it has nothing to do with the basic manufacturing process. Similarly, the technostructure's power to advise sometimes amounts to the power to decide, but that is outside the flow of formal authority that oversees the operating core.[1]

Some conceptual ideas of James D. Thompson. Before proceeding with a more detailed description of each of the five basic parts of the organization, it will be helpful to introduce at this point some of the important conceptual ideas of James D. Thompson (1967). To Thompson, "Uncertainty appears as the fundamental problem for complex organizations, and coping with uncertainty, as the essence of the administrative process" (p. 159). Thompson describes the organization in terms of a "technical core," equivalent to our operating core, and a group of "boundary spanning units." In his terms, the organization reduces uncertainty by sealing off this core from the environment so that the operating activities can be protected. The boundary spanning units face the environment directly and deal with its uncertainties. For example, the research department interprets the confusing scientific environment for the organization, while the public relations department placates a hostile social environment. . . .

Thompson also introduces a conceptual scheme to explain the *interdependencies* among organizational members. He distinguishes three ways in which the work can be coupled, shown in Figure 22.2. First is *pooled coupling*, where members share common resources but are otherwise independent. Figure 22.2(a) could represent teachers in a school who share common facilities

FIGURE 22.2 • POOLED, SEQUENTIAL, AND RECIPROCAL COUPLING OF WORK



in series, as in a relay race where the baton passes from runner to runner. Figure 22.2(b) could represent a mass production factory, where raw materials enter at one end, are sequentially fabricated and machined, then fed into an assembly line at various points, and finally emerge at the other end as finished products. In *reciprocal coupling*, the members feed their work back and forth among themselves; in effect each receives inputs from and provides outputs to the others. "This is illustrated by the airline which contains both operations and maintenance units. The production of the maintenance unit is an input for operations, in the form of a serviceable aircraft; and the product (or by-product) of operations is an input for maintenance, in the form of an aircraft needing maintenance" (Thompson, 1967, p. 55). Figure 22.2(c) could be taken

to represent this example, or one in a hospital in which the nurse "preps" the patient, the surgeon operates, and the nurse then takes care of the post-operative care.

Clearly, pooled coupling involves the least amount of interdependence among members. Anyone can be plucked out; and, as long as there is no great change in the resources available, the others can continue to work uninterrupted. Pulling out a member of a sequentially coupled organization, however, is like breaking a link in a chain—the whole activity must cease to function. Reciprocal coupling is, of course, more interdependent still, since a change in one task affects not only those farther along but also those behind.

Now let us take a look at each of the five parts of the organization.

THE OPERATING CORE

The operating core of the organization encompasses those members—the operators—who perform the basic work related directly to the production of products and services. The operators perform four prime functions: (1) They *secure the inputs* for production. For example, in a manufacturing firm, the purchasing department buys the raw materials and the receiving department takes it in the door. (2) They *transform the inputs into outputs*. Some organizations transform raw materials, for example, by chopping down trees and converting them to pulp and then paper. Others transform individual parts into complete units, for example, by assembling typewriters, while still others transform information or people, by writing consulting reports, educating students, cutting hair, or curing illness. (3) They *distribute the outputs*, for example, by selling and physically distributing what comes out of the transformation process. (4) They *provide direct support* to the input,

Since it is the operating core that the other parts of the organization seek to protect, standardization is generally carried furthest here. How far, of course, depends on the work being done: assemblers in automobile factories and professors in universities are both operators, although the work of the former is far more standardized than that of the latter.

The operating core is the heart of every organization, the part that produces the essential outputs that keep it alive. But except for the very smallest one, organizations need to build *administrative* components. The administrative component comprises the strategic apex, middle line, and technostructure.

THE STRATEGIC APEX

At the other end of the organization lies the strategic apex. Here are found those people charged with overall responsibility for the organization—the chief executive officer (whether called president, superintendent, Pope, or whatever), and any other top-level managers whose concerns are global. Included here as well are those who provide direct support to the top managers—their secretaries, assistants, and so on.[2] In some organizations, the strategic apex includes the executive committee (because its mandate is global even if its members represent specific interests); in others, it includes what is known as the chief executive office—two or three individuals who share the job of chief executive.

The strategic apex is charged with ensuring that the organization serves its mission in an effective way, and also that it serves the needs of those people who control or otherwise have power over the organization (such as owners, government agencies, unions of the employees, pressure groups). This entails three sets of duties. One al-

line who effect it. Among the managerial roles (Mintzberg, 1973) associated with direct supervision are resource allocator, including the design of the structure itself, the assignment of people and resources to tasks, the issuing of work orders, and the authorization of major decisions made by the employees; disturbance handler, involving the resolution of conflicts, exceptions, and disturbances sent up the hierarchy for resolution; monitor, involving the review of employees' activities; disseminator, involving the transmission of information to employees; and leader, involving the staffing of the organization and the motivating and rewarding of them. In its essence, direct supervision at the strategic apex means ensuring that the whole organization function smoothly as a single integrated unit.

But there is more to managing an organization than direct supervision. That is why even organizations with a minimal need for direct supervision, for example the very smallest that can rely on mutual adjustment, or professional ones that rely on formal training, still need managers. The second set of duties of the strategic apex involves the management of the organization's boundary conditions—its relationships with its environment. The managers of the strategic apex must spend a good deal of their time acting in the roles of spokesman, in informing influential people in the environment about the organization's activities; liaison, to develop high-level contact for the organization, and monitor, to tap these for information and to serve as the contact point for those who wish to influence the organization's goals; negotiator, when major agreements must be reached with outside parties; and sometimes even figurehead, in carrying out ceremonial duties, such as greeting important customers. (Someone once defined the manager, only half in jest, as that person who sees the visitors so that everyone else can get their work done.)

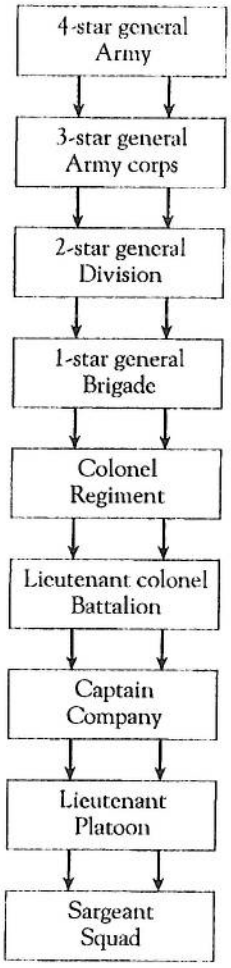
The third set of duties relates to the development of the organization's strategy. Strategy may be viewed as a mediating force between the organization and its environment. Strategy formulation therefore involves the interpretation of the environment and the development of consistent patterns in streams of organizational decisions ("strategies") to deal with it. Thus, in managing the boundary conditions of the organization, the managers of the strategic apex develop an understanding of its environment; and in carrying out the duties of direct supervision, they seek to tailor a strategy to its strengths and its needs, trying to maintain a pace of change that is responsive to the environment without being disruptive to the organization. Specifically, in the entrepreneur role, the top managers search for effective ways to carry out the organization's "mission" (i.e., its production of basic products and services), and sometimes even seek to change that mission. . . .

In general, the strategic apex takes the widest, and as a result the most abstract, perspective of the organization. Work at this level is generally characterized by a minimum of repetition and standardization, considerable discretion, and relatively long decision-making cycles. Mutual adjustment is the favored mechanism for coordination among the managers of the strategic apex itself.

THE MIDDLE LINE

The strategic apex is joined to the operating core by the chain of middle-line managers with formal authority. This chain runs from the senior managers just below the strategic apex to the *first-line supervisors* (e.g., the shop foremen), who have direct authority over the operators, and embodies the coordinating mechanism that we have called direct supervision. Figure 22.3 shows one famous chain of authority, that of the U.S. Army, from four-star general at the strategic apex to sergeant as first-line supervisor. This particular chain of authority is *scalar*, that is, it runs in a single line from top to bottom. But as we shall see later, not all need be: some divide and rejoin; a "subordinate" can have more than one "superior."

FIGURE 22.3 • THE SCALAR CHAIN OF COMMAND IN THE U.S. ARMY



What do all these levels of managers do? If the strategic apex provides overall direction and the operating core produces the products or services, why does the organization need this whole chain of middle-line managers? One answer seems evident. To the extent that the organization is large and reliant on direct supervision for coordination, it requires middle-line managers. In theory one manager—the chief executive supervision requires close personal contact between manager and operator, with the result that there is some limit to the number of operators any one manager can supervise—his so-called span of control. Small organizations can get along with one manager (at the strategic apex); bigger ones require more (in the middle-line). As Moses was told in the desert:

> Thou shalt provide out of all the people able men, such as fear God, men of truth, hating covetousness; and place such over them, to be rulers of thousands, and rulers of hundreds, rulers of fifties, and rulers of tens: and let them judge the people at all seasons: and it shall be, that every great matter they shall bring unto thee, but every small matter they shall judge: so shall it be easier for thyself, and they shall bear the burden with thee. If thou shalt do this thing, and God command thee so, then thou shalt be able to endure, and all this people shall also go to their place in peace (Exodus 18:21–24).

Thus, an organizational *hierarchy* is built as a first-line supervisor is put in charge of a number of operators to form a basic organizational unit, another manager is put in charge of a number of these units to form a higher level unit, and so on until all the remaining units can come under a single manager at the strategic apex—designated the "chief executive officer"—to form the whole organization.

In this hierarchy, the middle-line manager performs a number of tasks in the flow of direct supervision above and below him. He collects "feedback" information on the performance of his own unit and passes some of this up to the managers above him, often aggregating it in the process. The sales manager of the machinery firm may receive information on every sale, but he reports to the district sales manager only a monthly total. He also intervenes in the flow of decisions. Flowing up are disturbances in the unit, proposals for change, decisions requiring authorization. Some the middle-line manager handles himself, while others he passes on

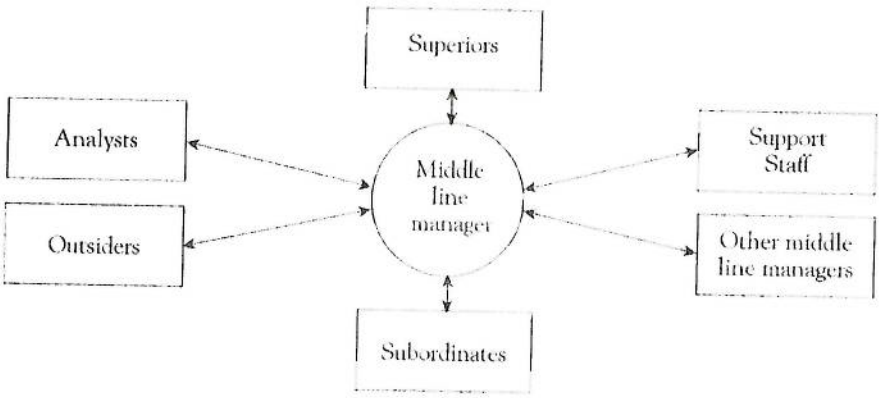
must allocate in his unit, rules and plans that he must elaborate and projects that he must implement there. For example, the strategic apex in the Postal Service may decide to implement a project to sell "domestograms." Each regional manager and, in turn, each district manager must elaborate the plan as it applies to his geographical area.

But like the top manager, the middle manager is required to do more than simply engage in direct supervision. He, too, has boundary conditions to manage, horizontal ones related to the environment of his own unit. That environment may include other units within the larger organization as well as groups outside the organization. The sales manager must coordinate by mutual adjustment with the managers of production and of research, and he must visit some of the organization's customers. The foreman must spend a good deal of time with the industrial engineers who standardize the work processes of the operators and with the supplier installing a new machine in his shop, while the plant manager may spend his time with the production scheduler and the architect designing a new factory. In effect, each middle-line manager maintains liaison contacts with the other managers, analysts, support staffers, and outsiders whose work is interdependent with that of his own unit. Furthermore, the middle-line manager, like the top manager, is concerned with formulating the strategy for his unit, although this strategy is, of course, significantly affected by the strategy of the overall organization.

In general, the middle-line manager performs all the managerial roles of the chief executive, but in the context of managing his own unit (Mintzberg, 1973). He must serve as a figurehead for his unit and lead its members; develop a network of liaison contacts; monitor the environment and his unit's activities and transmit some of the information he receives into his own unit, up the hierarchy, and outside the chain of command; allocate resources within his unit; negotiate with outsiders; initiate strategic change; and handle exceptions and conflicts.

Managerial jobs do, however, shift in orientation as they descend in the chain of authority. There is clear evidence that the job becomes more detailed and elaborated, less abstract and aggregated, more focused on the work flow itself. Thus, the "real-time" roles of the manager—in particular, negotiation and the handling of disturbances—become especially important at lower levels in the hierarchy (Mintzberg, 1973, pp. 110–113). Martin (1956) studied the decisions made by four levels of production managers in the chain of authority and concluded that at each successively lower level, the decisions were more frequent, of shorter

FIGURE 22.4 • THE LINE MANAGER IN THE MIDDLE



duration, and less elastic, ambiguous, and abstract; solutions tended to be more pat or predetermined; the significance of events and interrelationships was more clear; in general, lower-level decision making was more structured.

Figure 22.4 shows the line manager in the middle of a field of forces. Sometimes these forces become so great—especially those of the analysts to institutionalize his job by the imposition of rules on the unit—that the individual in the job can hardly be called a "manager" at all, in the sense of really being "in charge" of an organizational unit. This is common at the level of first-line supervisor—for example, the foreman in some mass production manufacturing firms and branch managers in some large banking systems.

THE TECHNOSTRUCTURE

In the technostructure we find the analysts (and their supporting clerical staff) who serve the organization by affecting the work of others. These analysts are removed from the operating work flow—they may design it, plan it, change it, or train the people who do it, but they do not do it themselves. Thus, the technostructure is effective only when it can use its analytical techniques to make the work of others more effective.[3]

Who makes up the technostructure? There are the analysts concerned with adaptation, with changing the organization to meet environmental change, and those concerned with control, with stabilizing and standardizing patterns of activity in the organization (Katz and Kahn, 1966). In this book we are concerned largely with the control analysts, those who focus their attention directly on the design and functioning of structure. The control analysts of the technostructure serve to effect standardization in the organization. This is not to say that operators cannot standardize their own work, just as everyone establishes his or her own procedure for getting dressed in the morning, or that managers cannot do it for them. But in general, the more standardization an organization uses, the more it relies on its technostructure. Such standardization reduces the need for direct supervision, in effect enabling clerks to do what managers once did.

We can distinguish three types of control analysts who correspond to the three forms of standardization: work study analysts (such as industrial engineers), who standardize work processes; planning and control analysts (such as long-range planners, budget analysts, and accountants), who standardize outputs; and personnel analysts (including trainers and recruiters), who standardize skills.

In a fully developed organization, the technostructure may perform at all levels of the hierarchy. At the lowest levels of the manufacturing firm, analysts standardize the operating work flow by scheduling production, carrying out time-and-method studies of the operator's work, and instituting systems of quality control. At middle levels, they seek to standardize the intellectual work of the organization (e.g., by training middle managers) and carry out operations research studies of informational tasks. On behalf of the strategic apex, they design strategic planning systems and develop financial systems to control the goals of major units.

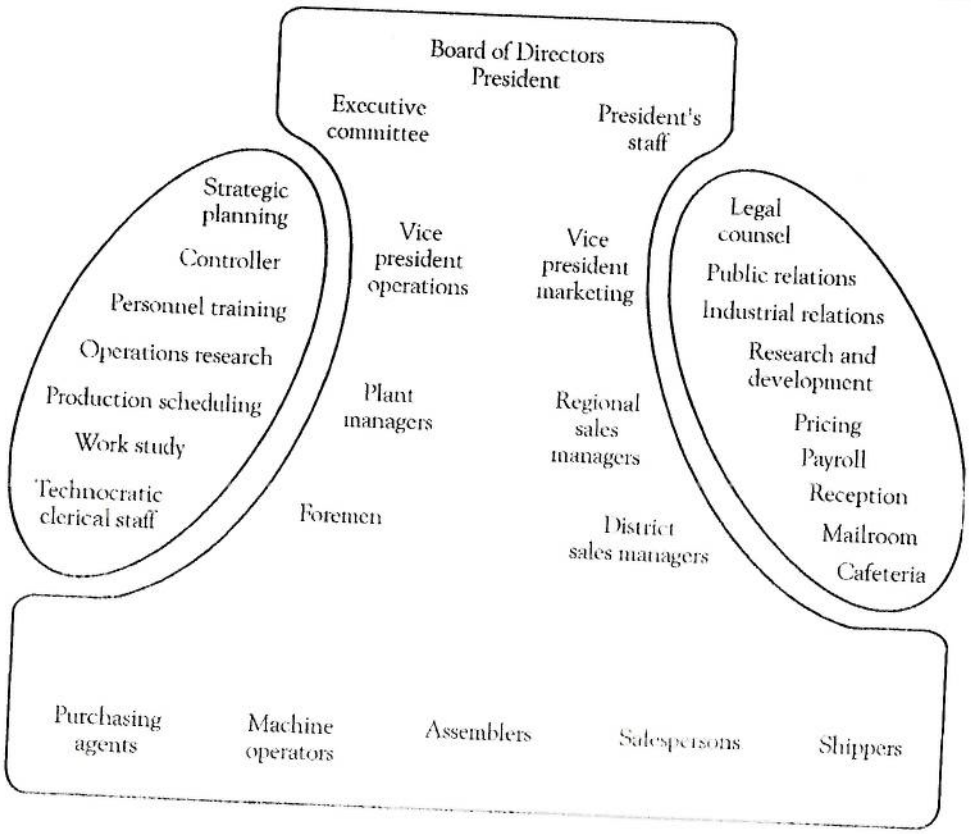
While the analysts exist to standardize the work of others, their own work would appear to be coordinated with others largely through mutual adjustment. (Standardization of skills does play a part in this coordination, however, because analysts are typically highly trained specialists.) Thus, analysts spend a good deal of their time in informal communication. Guetzkow (1965, p. 537), for example, notes that staff people typically have wider communication contacts than line people, and my review of the literature on managerial work (Mintzberg, 1973, pp. 116–118) showed some evidence that staff managers pay more attention to the information processing roles—monitor, disseminator, spokesman—than do line managers.

SUPPORT STAFF

A glance at the chart of almost any large contemporary organization reveals a great number of units, all specialized, that exist to provide support to the organization outside the operating work flow. Those comprise the *support staff*. For example, in a university, we find the alma mater fund, building and grounds department, museum, university press, bookstore, printing service, payroll department, janitorial service, endowment office, mailroom, real estate office, security department, switchboard, athletics department, student placement office, student residence, faculty club, guidance service, and chaplainery. None is a part of the operating core, that is, none engages in teaching or research, or even supports it directly (as does, say, the computing center or the library), yet each exists to provide indirect support to these basic missions. In the manufacturing firm, these units run the gamut from legal counsel to plant cafeteria. . . .

The support units can be found at various levels of the hierarchy, depending on the receivers of their service. In most manufacturing firms, public relations and legal counsel are located near the top, since they tend to serve the strategic apex directly. At middle levels are found the units that support the decisions made there, such as industrial relations, pricing, and research and development. And at the lower levels are found the units with more standardized work, that akin to the work of the operating core—cafeteria, mailroom, reception, payroll. Figure 22.5 shows all these support

FIGURE 22.5 • SOME MEMBERS AND UNITS OF THE PARTS OF THE MANUFACTURING FIRM



groups overlaid on our logo, together with typical groups from the other four parts of the organization, again using the manufacturing firm as our example.

Because of the wide variations in the types of support units, we cannot draw a single definitive conclusion about the favored coordinating mechanism for all of them. Each unit relies on whatever mechanism is most appropriate for itself—standardization of skills in the office of legal counsel, mutual adjustment in the research laboratory, standardization of work processes in the cafeteria. However, because many of the support units are highly specialized and rely on professional staff, standardization of skills may be the single most important coordinating mechanism. . . .

The most dramatic growth in organizations in recent decades has been in these staff groups, both the technostructure and the support staff. For example, Litterer (1973, pp. 584–585), in a study of thirty companies, noted the creation of 292 new staff units between 1920 and 1960, nearly ten units per company. More than half these units were in fact created between 1950 and 1960.

Organizations have always had operators and top managers, people to do the basic work and people to hold the whole system together. As they grew, typically they first elaborated their middle-line component, on the assumption in the early literature that coordination had to be effected by direct supervision. But as standardization became an accepted coordinating mechanism, the technostructure began to emerge. The work of Frederick Taylor gave rise to the "scientific management" movement of the 1920s, which saw the hiring of many work study analysts. Just after World War II, the establishing of operations research and the advent of the computer pushed the influence of the technostructure well into the middle levels of the organization, and with the more recent popularity of techniques such as strategic planning and sophisticated financial controls, the technostructure has entrenched itself firmly at the highest levels of the organization as well. And the growth of the support staff has perhaps been even more dramatic, as all kinds of specializations developed during this century—scientific research in a wide number of fields, industrial relations, public relations and many more. Organizations have sought increasingly to bring these as well as the more traditional support functions such as maintenance and cafeteria within their boundaries. Thus, the ellipses to the left and right in the logo have become great bulges in many organizations. Joan Woodward (1965, p. 60) found in her research that firms in the modern process industries (such as oil refining) averaged one staff member for less than three operators, and in some cases the staff people actually outnumbered the operators by wide margins.[4]

NOTES

1. There are other, completely different, uses of the term "staff" that we are avoiding here. The military "chiefs of staff" are really managers of the strategic apex; the hospital "staff" physicians are really operators. Also, the introduction of the line/staff distinction here is not meant to sweep all of its problems under the rug, only to distinguish those involved directly from those involved peripherally with the operating work of organizations. By our definition, the production and sales functions in the typical manufacturing firm are clearly line activities, marketing research and public relations clearly staff. To debate whether engineering is line or staff—does it serve the operating core indirectly or is it an integral part of it?—depends on the importance one imputes to engineering in a particular firm. There is a gray area between line and staff: where it is narrow, for many organizations, we retain the distinction; where it is wide, we shall explicitly discard it.
2. Our subsequent discussion will focus only on the managers of the strategic apex, the work of the latter group being considered an integral part of their own.
3. This raises an interesting point: that the technostructure has a built-in commitment to change, to perpetual improvement. The modern organization's obsession with

change probably derives in part at least from large and ambitious technostructures seeking to ensure their own survival. The perfectly stable organization has no need for a technostructure.

4. Woodward's tables and text here are very confusing, owing in part at least to some line errors in the page makeup. The data cited above are based on Figure 18, page 60, which seems to have the title that belongs to Figure 17 and which seems to relate back to Figure 7 on page 28, not to Figure 8 as Woodward claims.

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