10

THE PROFESSIONAL BUREAUCRACY

Prime Coordinating Mechanism:	Standardization of skills
Key Part of Organization:	Operating core
Main Design Parameters:	Training, horizontal job specialization, vertical and horizontal decentralization
Situational Factors:	Complex, stable environment; nonregulating, nonsophisticated technical system; fashionable

We have seen evidence at various points in this book that organizations can be bureaucratic without being centralized. Their operating work is stable, leading to "predetermined or predictable, in effect, standardized" behavior (our definition of bureaucracy in Chapter 2). But it is also complex, and so must be controlled directly by the operators who do it. Hence, the organization turns to the one coordinating mechanism that allows for standardization and decentralization at the same time—namely, the standardization of skills. This gives rise to a structural configuration sometimes called *Professional Bureaucracy*, common in universities, general hospitals, school systems, public accounting firms, social-work agencies, and craft production firms. All rely on the skills and knowledge of their operating professionals to function; all produce standard products or services.

The Basic Structure

The work of the operating core

Here again we have a tightly knit configuration of the design parameters. Most important, **the Professional Bureaucracy relies for coordination on the standardization of skills and its associated design parameter, training and indoctrination. It hires duly trained and indoctrinated specialists—professionals—for the operating core, and then gives them considerable control over their own work.** In effect, the work is highly specialized in the horizontal dimension, but enlarged in the vertical one.

Control over his own work means that the professional works relatively independently of his colleagues, but closely with the clients he serves. For example, "the teacher works alone within the classroom, relatively hidden from colleagues and superiors, so that he has a broad discretionary jurisdiction within the boundaries of the classroom" (Bidwell, 1965:976). Likewise, many doctors treat their own patients, and accountants maintain personal contact with the companies whose books they audit.

Most of the necessary coordination between the operating professionals is then handled by the standardization of skills and knowledge—in effect, by what they have learned to expect from their colleagues. During an operation as long and as complex as open-heart surgery, "very little needs to be said [between the anesthesiologist and the surgeon] preceding chest opening and during the procedure on the heart itself: lines, beats and lights on equipment are indicative of what everyone is expected to do and does—operations are performed in absolute silence, particularly following the chest-opening phase" (Gosselin, 1978). The point is perhaps best made in reverse, by the cartoon that shows six surgeons standing around a patient on an operating table with one saying, "Who opens?" Similarly, the policy and marketing courses of the management school may be integrated without the two professors involved having even met. As long as the courses are standard, each knows more or less what the other teaches.

Just how standardized complex professional work can be is illustrated in a paper read by Spencer (1976) before a meeting of the International Cardiovascular Society. Spencer noted that "becoming a skillful clinical surgeon requires a long period of training, probably five or more years" (p. 1178). An important feature of that training is "repetitive practice" to evoke "an automatic reflex" (p. 1179). So automatic, in fact, that Spencer keeps his series of surgical "cookbooks," in which he lists, even for "complex" operations, the essential steps as chains of thirty to forty symbols on a single sheet, to "be reviewed mentally in sixty to 120 seconds at some time during the day preceding the operation" (p. 1182). But no matter how standardized the knowledge and skills, their complexity ensures that considerable discretion remains in their application. No two professionals—no

two surgeons or teachers or social workers—ever apply them in exactly the same way. Many judgments are required.

Training and indoctrination are a complicated affair in the Professional Bureaucracy. The initial training typically takes place over a period of years in a university or special institution. Here the skills and knowledge of the profession are formally programmed into the would-be professional. But in many cases, that is only the first step, even if the most important one. There typically follows a long period of on-the-job training, such as internship in medicine and articling in accounting. Here the formal knowledge is applied and the practice of the skills perfected, under the close supervision of members of the profession. On-the-job training also completes the process of indoctrination, which began during the formal teaching. Once this process is completed, the professional association typically examines the trainee to determine whether he has the requisite knowledge, skills, and norms to enter the profession. That is not to say, however, that the person is "examined for the last time in his life, and is pronounced completely full," such that "after this, no new ideas can be imparted to him," as humorist and academic Stephen Leacock once commented about the Ph.D., the hurdle to entering the profession of university teaching. The entrance examination only tests the basic requirements at one point in time; the process of training continues. As new knowledge is generated and new skills develop, the professional upgrades his expertise. He reads the journals, attends the conferences, and perhaps also returns periodically for formal retraining.

The bureaucratic nature of the structure

All this training is geared to one goal—the internalization of standards that serve the client and coordinate the professional work. In other words, **the structure of these organizations is essentially bureaucratic, its coordination—like that of the Machine Bureaucracy—achieved by design, by standards that predetermine what is to be done.** Thus:

> . . . obstetrics and gynecology is a relatively routine department, which even has something resembling an assembly (or deassembly?) line wherein the mother moves from room to room and nurse to nurse during the predictable course of her labor. It is also one of the hospital units most often accused of impersonality and depersonalization. For the mother, the birth is unique, but not for the doctor and the rest of the staff who go through this many times a day. (Perrow, 1970:74)

But the two kinds of bureaucracies differ markedly in the source of their standardization. **Whereas the Machine Bureaucracy generates its own standards—its technostructure designing the work standards for its operators and its line managers enforcing them—the standards of the**

Professional Bureaucracy originate largely outside its own structure, in the self-governing associations its operators join with their colleagues from other Professional Bureaucracies. These associations set universal standards, which they make sure are taught by the universities and used by all the bureaucracies of the profession. **So whereas the Machine Bureaucracy relies on authority of a hierarchical nature—the power of office—the Professional Bureaucracy emphasizes authority of a professional nature—the power of expertise.**

The other forms of standardization are, in fact, difficult to rely on in the Professional Bureaucracy. The work processes themselves are too complex to be standardized directly by analysts. One need only try to imagine a work-study analyst following a cardiologist on his rounds or observing a teacher in a classroom in order to program the work. Similarly, the outputs of professional work cannot easily be measured and so do not lend themselves to standardization. Imagine a planner trying to define a cure in psychiatry, the amount of learning that takes place in the classroom, or the quality of an accountant's audit. Thus, Professional Bureaucracies cannot rely extensively on the formalization of professional work or on systems to plan and control it.

Much the same conclusion can be drawn for the two remaining coordinating mechanisms. Both direct supervision and mutual adjustment impede the professional's close relationships with his clients. That relationship is predicated on a high degree of professional autonomy—freedom from having not only to respond to managerial orders but also to consult extensively with peers. In any event, the use of the other four coordinating mechanisms is precluded by the capacity of the standardization of skills to achieve a good deal of the coordination necessary in the operating core.

The pigeonholing process

To understand how the Professional Bureaucracy functions in its operating core, it is helpful to think of it as a repertoire of standard programs—in effect, the set of skills the professionals stand ready to use—that are applied to predetermined situations, called contingencies, also standardized. As Weick (1976) notes of one case in point, "schools are in the business of building and maintaining categories" (p. 8). The process is sometimes known as *pigeonholing*. In this regard, **the professional has two basic tasks: (1) to categorize the client's need in terms of a contingency, which indicates which standard program to use, a task known as diagnosis; and (2) to apply, or execute, that program.** Pigeonholing simplifies matters enormously. "People are categorized and placed into pigeonholes because it would take enormous resources to treat every case as unique and requiring thorough analysis. Like stereotypes, categories allow us to move through the world without making continuous decisions at every moment" (Perrow, 1970:58). Thus, a psychiatrist examines the patient, declares him to be manic-depressive, and initiates psychotherapy. Similarly, a professor finds 100 students registered in his course and executes his lecture program; faced with twenty instead, he runs the class as a seminar. And the management consultant carries his own bag of standard acronymical tricks—MBO, MIS, LRP, PERT, OD. The client with project work gets PERT; the one with managerial conflicts, OD. Of course, clients often help out by categorizing themselves. As noted earlier, the person with an ingrown toenail does not visit a cardiologist; the student who wants to become a manager registers in the university's business school.

Simon captures the spirit of pigeonholing with his comment, "The pleasure that the good professional experiences in his work is not simply a pleasure in handling difficult matters; it is a pleasure in using skillfully a well-stocked kit of well-designed tools to handle problems that are comprehensible in their deep structure but unfamiliar in their detail" (1977:98).

It is this pigeonholing process that enables the Professional Bureaucracy to decouple its various operating tasks and assign them to individual, relatively autonomous professionals. Each can, instead of giving a great deal of attention to coordinating his work with his peers, focus on perfecting his skills. This is not to say that all uncertainty can be removed from the performance of the work, but only that attempts are made to contain whatever uncertainty does remain in the jobs of single professionals. Focusing the uncertainty in this way is one of the reasons the professional requires considerable discretion in his work.

In the pigeonholing process, we see fundamental differences among the Machine Bureaucracy, the Professional Bureaucracy, and the Adhocracy. The Machine Bureaucracy is a single-purpose structure; presented with a stimulus, it executes its one standard sequence of programs, just as we kick when tapped on the knee. No diagnosis is involved. In the Professional Bureaucracy, diagnosis is a fundamental task, but it is circumscribed. The organization seeks to match a predetermined contingency to a standard program. Fully open-ended diagnosis—that which seeks a creative solution to a unique problem—requires a third configuration, which we call Adhocracy. No standard contingencies or programs exist in that configuration.

It is an interesting characteristic of the Professional Bureaucracy that its pigeonholing process creates an equivalence in its structure between the functional and market bases for grouping. **Because clients are categorized, or categorize themselves, in terms of the functional specialists who serve them, the structure of the Professional Bureaucracy becomes at the same time both a functional and a market-based one.** Two illustrations help explain the point: A hospital gynecology department and a university chemistry department can be called functional because they group specialists according to the knowledge, skills, and work processes they use, or

market-based because each unit deals with its own unique types of clients—women in the first case, chemistry students in the second. Thus, the distinction between functional and market bases for grouping breaks down in the special case of the Professional Bureaucracy.

Focus on the operating core

All the design parameters that we have discussed so far—the emphasis on the training of operators, their vertically enlarged jobs, the little use made of behavior formalization or planning and control systems—suggest that **the operating core is the key part of the Professional Bureaucracy. The only other part that is fully elaborated is the support staff, but that is focused very much on serving the operating core.** Given the high cost of the professionals, it makes sense to back them up with as much support as possible, to aid them and have others do whatever routine work can be formalized. Thus, universities have printing facilities, faculty clubs, alma mater funds, publishing houses, archives, athletics departments, libraries, computer facilities, and many, many other support units.

The technostructure and middle line of management are not highly elaborated in the Professional Bureaucracy. In other configurations (except Adhocracy), they coordinate the work of the operating core. But in the Professional Bureaucracy, they can do little to coordinate the operating work. Because the need for planning and the formalizing of the work of the professionals are very limited, there is little call for a technostructure (except, as we shall see, in the case of the nonprofessional support staff). In McGill University, for example, an institution with 17,000 students and 1,200 professors, the only units that could be identified by the author as technocratic were two small departments concerned with finance and budgeting, a small planning office, and a center to develop the professors' skills in pedagogy (the latter two fighting a continual uphill battle for acceptance). Likewise, the middle line in the Professional Bureaucracy is

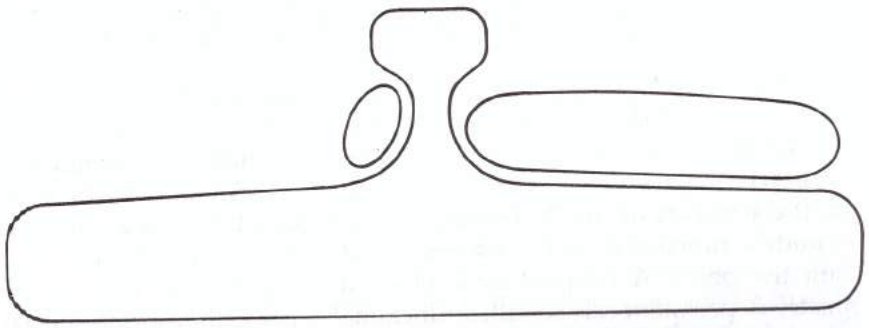


Figure 10-1. *The Professional Bureaucracy*

thin. With little need for direct supervision of the operators or mutual adjustment between them, the operating units can be very large, with few managers at the level of first-line supervisor, or, for that matter, above them. As noted earlier, the McGill Faculty of Management at the time of this writing functions effectively with sixty professors and a single manager, its dean.

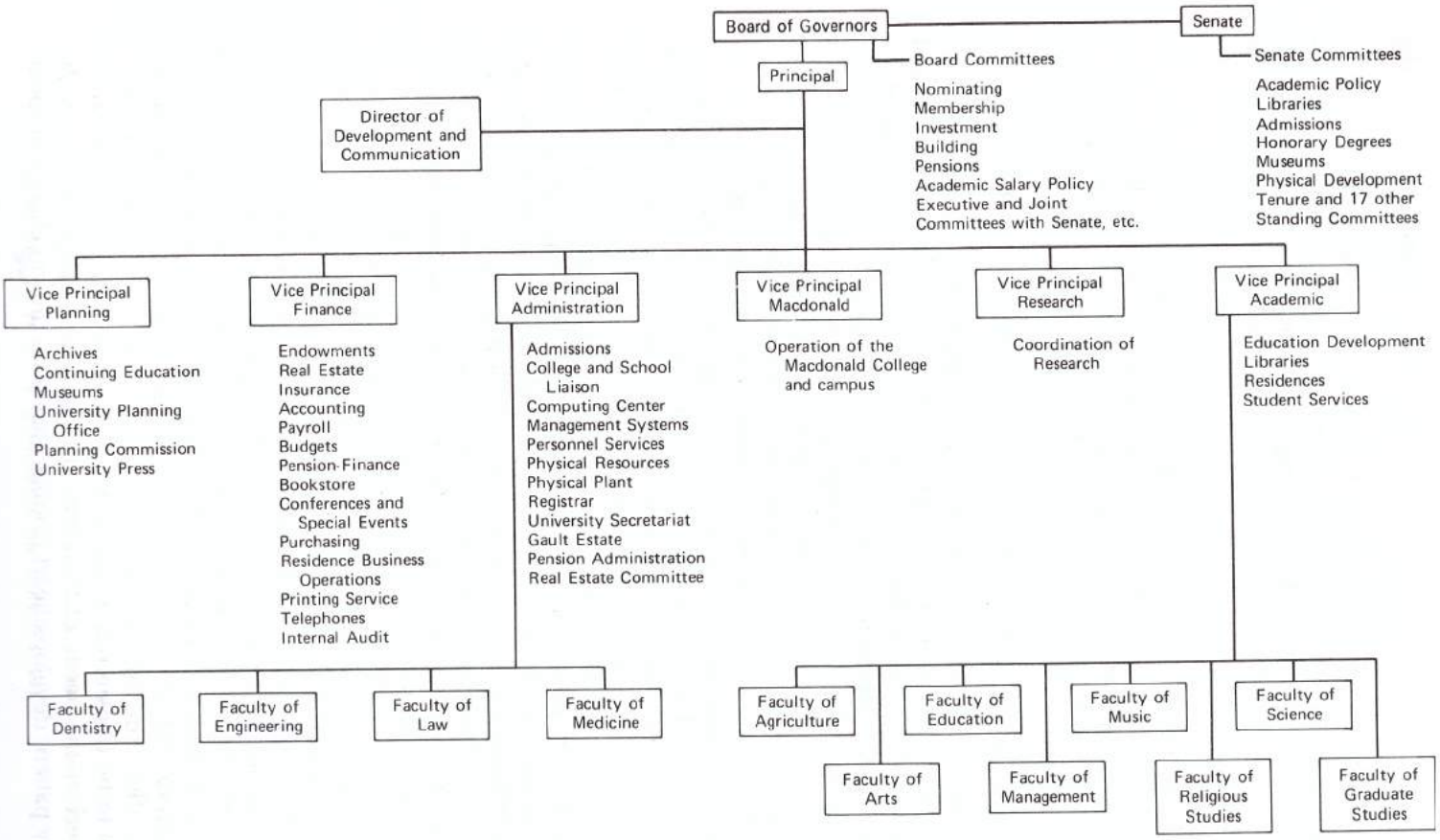
Thus, Figure 10–1 shows the Professional Bureaucracy, in terms of our logo, as a flat structure with a thin middle line, a tiny technostructure, and a fully elaborated support staff. All these characteristics are reflected in the organigram of McGill University, shown in Figure 10–2.

Decentralization in the professional bureaucracy

Everything we have seen so far tells us that **the Professional Bureaucracy is a highly decentralized structure, in both the vertical and horizontal dimensions.** A great deal of the power over the operating work rests at the bottom of the structure, with the professionals of the operating core. Often, each works with his own clients, subject only to the collective control of his colleagues, who trained and indoctrinated him in the first place and thereafter reserve the right to censure him for malpractice.

The professional's power derives from the fact that not only is his work too complex to be supervised by managers or standardized by analysts, but also his services are typically in great demand. This gives the professional mobility, which enables him to insist on considerable autonomy in his work. When the professional does not get the autonomy he feels he requires, he is tempted to pick up his kit bag of skills and move on.

One is inclined to ask why professionals bother to join organizations in the first place. There are, in fact, a number of good reasons. For one thing, professionals can share resources, including support services, in a common organization. One surgeon cannot afford his own operating theater, so he shares it with others, just as professors share laboratories, lecture halls, libraries, and printing facilities. Organizing also brings the professionals together to learn from each other, and to train new recruits. Some professionals must join the organization to get clients. Although some physicians have their private patients, others receive them from the hospital emergency department or from in-patient referrals. Another reason professionals band together to form organizations is that the clients often need the services of more than one at the same time. An operation requires at least a surgeon, an anesthesiologist, and a nurse; an MBA program cannot be run with less than about a dozen different specialists. Finally, the bringing together of different types of professionals allows clients to be transferred between them when the initial diagnosis proves incorrect or the needs of the client change during execution. When the kidney patient develops heart trouble, that is no time to change hospitals



Note: This unofficial organigram was drawn by the author based upon University documents.

Figure 10-2. *Organigram of McGill University (circa 1978)*

in search of a cardiologist. Similarly, when an accountant finds his client needs tax advice, it is comforting to know that other departments in the same organization stand ready to provide the necessary service.

The administrative structure

What we have seen suggests that the Professional Bureaucracy is a highly democratic structure, at least for the professionals of the operating core. In fact, **not only do the professionals control their own work, but they also seek collective control of the administrative decisions that affect them**—decisions, for example, to hire colleagues, to promote them, and to distribute resources. Controlling these decisions requires control of the middle line of the organization, which professionals do by ensuring that it is staffed with "their own." Some of the administrative work the operating professionals do themselves. Every university professor, for example, serves on committees of one kind or another to ensure that he retains some control over the decisions that affect his work. Moreover, full-time administrators who wish to have any power at all in these structures must be certified members of the profession and preferably be elected by the professional operators, or at least appointed with their blessing. What emerges, therefore, is a rather democratic administrative structure.

This administrative structure itself relies largely on mutual adjustment for coordination. Thus, the liaison devices, although uncommon in the operating core, are important design parameters in the middle line. Task forces and especially standing committees abound, as indicated in Figure 10–2; a number of positions are designated to integrate the administrative efforts, as in the case of the ward manager in the hospital; and some Professional Bureaucracies even use matrix structure in administration.

Because of the power of their operators, Professional Bureaucracies are sometimes called "collegial" organizations. In fact, some professionals like to describe them as inverse pyramids, with the professional operators at the top and the administrators down below to serve them—to ensure that the surgical facilities are kept clean and the classrooms well supplied with chalk. Such a description underestimates the power of the *professional* administrator—a point we shall return to shortly—but it seems to be an accurate description of the nonprofessional one—namely, the administrator who manages the support units. For the support staff—often much larger than the professional one, but charged largely with doing non-professional work—there is no democracy in the Professional Bureaucracy, only the oligarchy of the professionals. Support units, such as housekeeping or kitchen in the hospital or printing in the university, are as likely as not to be managed tightly from the top. They exist, in effect, as machine bureaucratic constellations within the Professional Bureaucracy.

What frequently emerge in the Professional Bureaucracy are parallel administrative hierarchies, one democratic and bottom-up for the professionals, and a second machine bureaucratic and top-down for the support staff. In the professional hierarchy, power resides in expertise; one has influence by virtue of one's knowledge and skills. In other words, a good deal of power remains at the bottom of the hierarchy, with the professional operators themselves. That does not, of course, preclude a pecking order among them. But it does require the pecking order to mirror the professionals' experience and expertise. As they gain experience and reputation, academics move through the ranks of lecturer, and then assistant, associate, and full professor; and physicians enter the hospital as interns and move up to residents before they become members of the so-called medical staff. In fact, in many hospitals, this staff does not even report to the executive director—the chief executive officer—but reports directly to the board of trustees. (Indeed, Charns (1976) reports that 41 percent of the physicians he surveyed in academic medical centers claimed they were responsible to no one!) In the nonprofession hierarchy, in contrast, power and status reside in administrative office; one salutes the stripes, not the man. Unlike the case in the professional structure, here one must practice administration, not a specialized function of the organization, to attain status. But "research indicates that a professional orientation toward service and a bureaucratic orientation toward disciplined compliance with procedures are opposite approaches toward work and often create conflict in organizations" (Blau, 1967–68:456). Hence, these two parallel hierarchies are kept quite independent of each other, as shown in Figure 10–3.

The roles of the professional administrator

Where does all this leave the administrators of the professional hierarchy, the executive directors and chiefs of the hospitals and the presidents and deans of the universities? Are they powerless? Compared with their peers

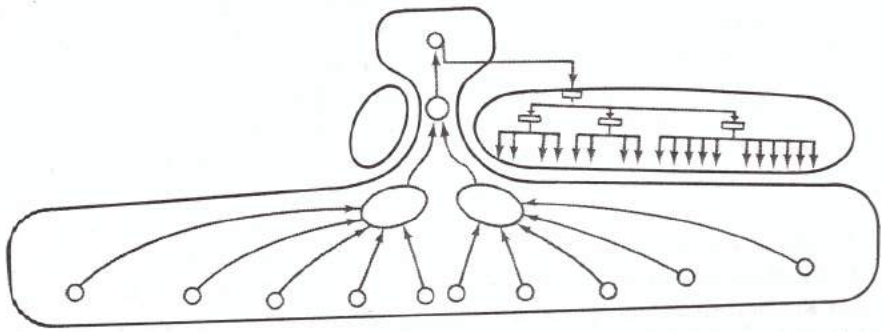


Figure 10-3. *Parallel Hierarchies in the Professional Bureaucracy*

in the Simple Structure and the Machine Bureaucracy, they certainly lack a good deal of power. But that is far from the whole story. The professional administrator may not be able to control the professionals directly, but he does perform a series of roles that gives him considerable indirect power in the structure.

First, **the professional administrator spends much time handling disturbances in the structure.** The pigeonholing process is an imperfect one at best, leading to all kinds of jurisdictional disputes between the professionals. Who should teach the statistics course in the MBA program—the mathematics department or the business school? Who should perform mastectomies in hospitals—surgeons who specialize in operations or gynecologists who specialize in women? Seldom, however, can a senior administrator impose a solution on the professionals or units involved in a dispute. Rather, the unit managers—chiefs, deans, or whoever—must sit down together and negotiate a solution on behalf of their constituencies. Coordination problems also arise frequently between the two parallel hierarchies, and it often falls to the professional administrators to resolve them.

Second, **the professional administrators—especially those at higher levels—serve key roles at the boundary of the organization, between the professionals inside and interested parties—governments, client associations, and so on—on the outside.** On the one hand, the administrators are expected to protect the professionals' autonomy, to "buffer" them from external pressures. On the other hand, the administrators are expected to woo these outsiders to support the organization, both morally and financially. Thus, the external roles of the manager—maintaining liaison contacts, acting as figurehead and spokesman in a public relations capacity, negotiating with outside agencies—emerge as primary ones in professional administration.

Some view the roles professional administrators are called upon to perform as signs of weakness. They see these people as the errand boys of the professionals, or else as pawns caught in various tugs of war—between one professional and another, between support staffer and professional, between outsider and professional. In fact, however, these roles are the very sources of administrator power. Power is, after all, gained at the locus of uncertainty. And that is exactly where the professional administrators sit. The administrator who succeeds in raising extra funds for his organization gains a say in how these are distributed. Similarly, the one who can reconcile conflicts in favor of his unit or who can effectively buffer the professionals from external influence becomes a valued—and therefore powerful—member of the organization.

Ironically, **the professional becomes dependent on the effective administrator.** The professional faces a fundamental dilemma. Frequently, he abhors administration, desiring only to be left alone to practice his profes-

sion. But that freedom is gained only at the price of administrative effort—raising funds, resolving conflicts, buffering the demands of outsiders. This leaves the professional two choices: to do the administrative work himself, in which case he has less time to practice his profession, or to leave it to administrators, in which case he must surrender some of his power over decision making. And that power must be surrendered, it should be added, to administrators who, by virtue of the fact that they do not wish to practice the profession, probably favor a different set of goals. Damned if he does and damned if he doesn't. Take the case of the university professor oriented to research. To ensure the fullest support for research in his department, he should involve himself in committees where questions of the commitment to teaching versus research are decided. But that takes time, specifically time away from research. What is the use of spending time protecting what one has no time left to do? So the professor is tempted to leave administration to full-time administrators, those who have expressed a lack of interest in research by virtue of seeking full-time administrative office.

We can conclude that **power in these structures does flow to those professionals who care to devote effort to doing administrative instead of professional work, especially to those who do it well. But that, it should be stressed, is not laissez-faire power: the professional administrator keeps his power only as long as the professionals perceive him to be serving their interests effectively.** The managers of the Professional Bureaucracy may be the weakest among those of the five configurations, but they are far from impotent. *Individually*, they are usually more powerful than individual professionals—the chief executive remaining the single most powerful member of the Professional Bureaucracy—even if that power can easily be overwhelmed by the *collective* power of the professionals.

Strategy formulation in the professional bureaucracy

A description of the strategy-formulation process in the Professional Bureaucracy perhaps best illustrates the two sides of the professional administrator's power. At the outset it should be noted that strategy takes on a very different form in these kinds of organizations. Since their outputs are difficult to measure, their goals cannot easily be agreed upon. So **the notion of a strategy—a single, integrated pattern of decisions common to the entire organization—loses a good deal of its meaning in the Professional Bureaucracy.**

Given the autonomy of each professional—his close working relationships with his clients, and his loose ones with his colleagues—it becomes logical to think in terms of a personal strategy for each professional. In many cases, each selects his own clients and his own methods of dealing

with them—in effect, chooses his own product-market strategy. But professionals do not select their clients and methods at random. The professionals are significantly constrained by the professional standards and skills they have learned. That is, the professional associations and training institutions outside the organization play a major role in determining the strategies that the professionals pursue. Thus, to an important extent, all organizations in a given profession exhibit similar strategies, imposed on them from the outside. These strategies—concerning what clients to serve and how—are inculcated in the professionals during their formal training and are modified as new needs emerge and as the new methods developed to cope with them gain acceptance by the professional associations. This outside control of strategy can sometimes be very direct: in one of the McGill studies, a hospital that refused to adopt a new method of treatment was, in effect, censured when one of the associations of medical specialists passed a resolution declaring failure to use it tantamount to malpractice.

We can conclude, therefore, that **the strategies of the Professional Bureaucracy are largely ones of the individual professionals within the organization as well as of the professional associations on the outside.** Largely, but not completely. There are still degrees of freedom that allow each organization within the profession to adapt the basic strategies to its own needs and interests. There are, for example, mental hospitals, women's hospitals, and veterans' hospitals; all conform to standard medical practice, but each applies it to a different market that it has selected.

How do these organizational strategies develop? It would appear that **the Professional Bureaucracy's own strategies represent the cumulative effect over time of the projects, or strategic "initiatives," that its members are able to convince it to undertake**—to buy a new piece of equipment in a hospital, to establish a new degree program in a university, to develop a new specialty department in an accounting firm. Most of these initiatives are proposed by members of the operating core—by "professional entrepreneurs" willing to expend the efforts needed to negotiate the acceptance of new projects through the complex administrative structure (and if the method is new and controversial, through outside professional associations as well).

What is the role of the professional administrator in all this? Certainly far from passive. As noted earlier, administration is neither the forte nor the interest of the operating professional. So he depends on the full-time administrator to help him negotiate his project through the system. For one thing, the administrator has time to worry about such matters. After all, administration is his job; he no longer practices the profession. For another, the administrator has a full knowledge of the administrative committee system as well as many personal contacts within it, both of which are necessary to see a project through it. The administrator deals with the system every day; the professional entrepreneur may promote only one

new project in his entire career. Finally, the administrator is more likely to have the requisite managerial skills—for example, those of negotiation and persuasion.

But the power of the effective administrator to influence strategy goes beyond helping the operating professionals. Every good manager seeks to change his organization in his own way, to alter its strategies to make it more effective. In the Professional Bureaucracy, this translates into a set of strategic initiatives that the administrator himself wishes to take. But in these structures—in principle, bottom-up—the administrator cannot impose his will on the professionals of the operating core. Instead, he must rely on his informal power, and apply it subtly. Knowing that the professionals want nothing more than to be left alone, the administrator moves carefully—in incremental steps, each one hardly discernible. In this way, he may achieve over time changes that the professionals would have rejected out of hand had they been proposed all at once.

Conditions of the Professional Bureaucracy

This third configuration appears wherever the operating core of an organization is dominated by skilled workers—professionals—who use procedures that are difficult to learn, yet are well defined. This means an environment that is both complex and stable—complex enough to require the use of difficult procedures that can be learned only in extensive formal training programs, yet stable enough to enable these skills to become well defined—in effect, standardized. Thus, the environment is the chief situational factor in the use of the Professional Bureaucracy.

In contrast, the factors of age and size are of less significance. Larger professional organizations may tend to be somewhat more formalized and to have more fully developed staff-support structures. But that does not preclude the existence of small Professional Bureaucracies, or, for that matter, of young ones as well. The Machine Bureaucracy has a lengthy start-up time because the standards need to be worked out within the organization. Thus, it passes through a period of Simple Structure before its procedures become routinized. In the Professional Bureaucracy, in contrast, the skilled employees bring the standards into the organization with them when they join, so there is little start-up time. Put a group of doctors in a new hospital or a group of lawyers in a new law office, and in no time they are functioning as if they had been there for years. Size would seem to be a relatively minor factor for the same reason, and also because the professionals to a large extent work independently. One accountant working on his own adheres to the same professional standards as 2,000 working in a giant firm. Thus, Professional Bureaucracies pass quickly through the stage of Simple Structure in their formative years.

Technical system is an important situational factor only for what it is not in the Professional Bureaucracy—neither highly regulating, sophisticated, nor automated. The professional operators of this configuration require considerable discretion in their work. It is they who serve the clients, usually directly and personally. So the technical system cannot be highly regulating, certainly not highly automated. The professional resists the rationalization of his skills—their division into simply executed steps—because that makes them programmable by the technostructure, destroys his basis of autonomy, and drives the structure to the machine bureaucratic form.

Nor can the technical system be sophisticated. The surgeon uses a scalpel, the accountant a pencil. Both must be sharp, but they are otherwise simple and commonplace instruments. Yet both allow their users to perform independently what can be exceedingly complex functions. More sophisticated instruments—such as the computer in the accounting firm or the coronary-care unit in the hospital—reduce the professional's autonomy by forcing him to work in multidisciplinary teams, as he does in the Adhocracy. These teams are concerned in large part with the design, modification, and maintenance of the equipment; its operation, because that tends to be regulating and often automated, impersonalizes the relationship between the professional and his clients. Thus, **in the pure form of the Professional Bureaucracy, the technology of the organization—its knowledge base—is sophisticated, but its technical system—the set of instruments it uses to apply that knowledge base—is not.**

Thus, the prime example of the Professional Bureaucracy is the *personal-service organization*, at least the one with complex, stable work. Schools and universities, consulting firms, law and accounting offices, and social-work agencies all rely on this configuration as long as they concentrate not on innovating in the solution of new problems, but on applying standard programs to well-defined problems. The same is true of hospitals, at least to the extent that their technical systems are simple. (In those areas that call for more sophisticated equipment—apparently a growing number, especially in teaching institutions—the hospital is driven toward a hybrid structure, with characteristics of the Adhocracy. But this tendency is mitigated by the hospital's overriding concern with safety. Only the tried and true can be used on regular patients. Institutions entrusted with the lives of their clients have a natural aversion to the looser, organic structures such as Adhocracy.) A good deal of the service sector of contemporary society, in fact, applies standard programs to well-defined problems. Hence, the Professional Bureaucracy tends to predominate there. And with the enormous growth of this sector in the last few decades, we find that this configuration has emerged as a major one.

So far, all our examples have come from the service sector. But Professional Bureaucracies can be found in manufacturing, too, notably where the environment demands work that is complex yet stable, and the technical system is neither regulating nor sophisticated. This is the case of the *craft enterprise*, an important variant of the Professional Bureaucracy. Here the organization relies on skilled craftsmen who use relatively simple instruments to produce standard outputs. The very term *craftsman* implies a kind of professional who learns traditional skills through long apprentice training and then is allowed to practice them free of direct supervision. Craft enterprises seem typically to have tiny administrations—no technostructures and few managers, many of whom, in any event, work alongside the craftsmen.

Many craftsmen were eliminated by the Industrial Revolution. Their jobs—for example, the making of shoes—were rationalized, and so control over them passed from the workers who did them to the analysts who designed them. Small craft enterprises metamorphosed into large Machine Bureaucracies. But some craft industries remain—for example, fine glasswork and handmade pottery, portrait photography, and gastronomic cuisine. In fact, as these examples indicate, the term *craft* has today come to be associated with functional art, handmade items that perform a function but are purchased for their aesthetic value. Evidence suggests that one major industry, construction, has also remained largely in the craft stage.

The markets of the Professional Bureaucracy are often diversified. As noted earlier, these organizations often bring together groups of professionals from different specialties who serve different types of clients. The hospital includes gynecologists to serve women, pediatricians to serve children, and so on; the university has its philosophy professors to teach those interested in general knowledge and its engineering professors for those in search of specific career skills. Hypothesis 11 would lead us to the conclusion that such market diversity encourages the use of the market basis for grouping the professionals. In fact, we have already seen this to be the case (although we also saw that the market basis for grouping turns out to be equivalent to the functional one in Professional Bureaucracies, as a result of the way in which professional services are selected).

Sometimes the markets of Professional Bureaucracies are diversified geographically, leading to a variant we call the *dispersed professional bureaucracy*. Here, the problem of maintaining loyalty to the organization becomes magnified, since the professionals do their autonomous work in remote locations, far from the administrative structure. The U.S. Forest Rangers, for example, are dispersed across the United States, each one on his own, as are CIA agents and certain consultants. As a result, their organizations must rely extensively on training and indoctrination, especially the latter. The employees are selected carefully, trained extensively, and indoctrinated heavily—often by the organization itself—before they are sent out to the remote areas to perform their work. Later, they are brought back to the central headquarters for fresh doses of indoctrination, and are often rotated in their jobs to ensure that their loyalty remains with the organization and does not shift to the geographical areas they serve.

The Professional Bureaucracy is also occasionally found as a hybrid structure. In our discussion of hospitals earlier, we alluded to a possible combination with characteristics of the Adhocracy that we can call the *professional bureau/adhocracy*. Another hybrid—the *simple professional bureaucracy*—occurs when highly trained professionals practicing standard skills nevertheless take their lead from a strong, sometimes even autocratic, leader, as in the Simple Structure. Consider, for example, the symphony orchestra, an organization staffed with highly skilled musicians who play standard repertoires. Some people have described it as a dictatorship of the conductor. In any event, there is no denying its need for strong leadership, based on direct supervision. In fact, after their revolution, the Russians tried a conductorless orchestra, but it lasted only a few years before conflicts among the musicians necessitated the reintroduction of a central leader.

Finally, we might note briefly the effects of the situational factors of power, notably fashion and the influence of the operators. *Professionalism* is a popular word among all kinds of identifiable specialists today. As a result, **Professional Bureaucracy is a highly fashionable structure**—and for good reason, since it is a rather democratic one. Thus, it is to the advantage of every operator to make his job more professional—to enhance the skills it requires, to keep the analysts of the technostructure from rationalizing those skills, and to establish associations that set industrywide standards to protect those skills. In these ways, the operator can achieve what always escapes him in the Machine Bureaucracy—control of his work and the decisions that affect it.

Some Issues Associated with Professional Bureaucracy

The Professional Bureaucracy is unique among the five configurations in answering two of the paramount needs of contemporary men and women. It is democratic, disseminating its power directly to its workers (at least those who are professional). And it provides them with extensive autonomy, freeing them even of the need to coordinate closely with their peers, and all the pressures and politics that entails. Thus, the professional has the best of both worlds: he is attached to an organization, yet is free to serve his clients in his own way, constrained only by the established standards of his profession.

As a result, professionals tend to emerge as responsible and highly motivated individuals, dedicated to their work and the clients they serve. Unlike the Machine Bureaucracy, which places barriers between the operator and the client, this configuration removes them, allowing a personal relationship to develop. Here the technical and social systems can function in complete harmony.

Moreover, **autonomy allows the professionals to perfect their skills, free of interference.** They repeat the same complex programs time after time, forever reducing the uncertainty until they get them just about perfect, like the Provençal potter who has spent his career perfecting the glazes he applies to identical pots. The professional's thought processes are "convergent"—vascular surgeon Spencer (1976) refers to them as deductive reasoning. He quotes approvingly the bridge aficionado who stood behind champion Charles Goren during a three-day tournament and concluded, "He didn't do anything I couldn't do, except he didn't make any mistakes" (p. 1181). That captures nicely the secure feelings of professionals and their clients in Professional Bureaucracies. The Provençal potter expects few surprises when he opens his kiln; so, too, do Dr. Spencer's patients when they climb onto his operating table. They know the program has been executed so many times—by this surgeon as well as by the many whose experiences he has read about in the journals—that the possibility of mistakes has been minimized. Hospitals do not even get to execute new programs on regular patients until those programs have been thoroughly tested and approved by the profession. So the client of the Professional Bureaucracy can take satisfaction in the knowledge that the professional about to serve him will draw on vast quantities of experience and skill, will apply them in a perfected, not an experimental procedure, and will probably be highly motivated in performing that procedure.

But in these same characteristics of democracy and autonomy lie the major problems of the Professional Bureaucracy. For **there is virtually no control of the work aside from that by the profession itself, no way to correct deficiencies that the professionals themselves choose to overlook.** What they tend to overlook are the major problems of coordination, of discretion, and of innovation that arise in these configurations.

Problems of coordination

The Professional Bureaucracy can coordinate effectively in its operating core only by the standardization of skills. Direct supervision and mutual adjustment are resisted as direct infringements on the professional's autonomy, in one case by administrators, in the other by colleagues. And standardization of work processes and of outputs are ineffective for the complex work with its ill-defined outputs. But **the standardization of skills is a loose coordinating mechanism at best, failing to cope with many of the needs that arise in the Professional Bureaucracy.**

There is, first of all, the need for coordination between the professionals and the support staff. To the professional, that is simply resolved: He gives the orders. But that only catches the support staffer between two systems of power pulling in different ways, the vertical power of line authority above him and the horizontal power of professional expertise to his side.

Perhaps more severe are the coordination problems among the professionals themselves. Unlike Machine Bureaucracies, Professional Bureaucracies are not integrated entities. They are collections of individuals who come together to draw on common resources and support services but otherwise want to be left alone. As long as the pigeonholing process works effectively, they can be. But that process can never be so good that client needs do not fall in the cracks between the standard programs. The world is a continuous intertwined system. Slicing it up, although necessary to comprehend it, inevitably distorts it (this book admittedly being no exception). Needs that fall at the margin or that overlap two categories tend to get forced—artificially—into one category or another. In contemporary medicine, for instance, the human body is treated less as one integrated system with interdependent parts than as a collection of loosely coupled organs that correspond to the different specialties. For the patient whose malady slots nicely into one of the specialties, problems of coordination do not arise. For others—the patient who falls between psychiatry and internal medicine, for instance—it means repeated transfers in search of the right department, a time-consuming process when time is critical. In universities, the pigeonholing process can be equally artificial, as in the case of the professor interested in the structure of production systems who fell between the operations and organizational behavior departments of his business school and so was denied tenure.

The pigeonholing process, in fact, emerges as the source of a great deal of the conflict of the Professional Bureaucracy. Much political blood is spilled in the continual reassessment of contingencies, imperfectly conceived, in terms of programs, artificially distinguished.

Problems of discretion

The assumption underlying the design of the Professional Bureaucracy is that the pigeonholing process contains all the uncertainties in single professional jobs. As we saw above, that assumption often proves false, to the detriment of the organization's performance. But even where it works, problems arise. For it focuses all the discretion in the hands of single professionals, whose complex skills, no matter how standardized, require the exercise of considerable judgment. Such discretion is, perhaps, appropriate for professionals who are competent and conscientious. Unfortunately, not all of them are. And **the Professional Bureaucracy cannot easily deal with professionals who are either incompetent or unconscientious.**

No two professionals are equally skilled. So the client who is forced to choose among them—to choose in ignorance, since he seeks professional help precisely because he lacks the specialized knowledge to help himself—is exposed to a kind of Russian Roulette, almost literally so in the case of medicine, where a single decision can mean life or death. But that is inevitable; little can be done aside from using the very best screening procedures for applicants to the training schools.

Of greater concern is the unconscientious professional—the one who refuses to update his skills after graduation, who cares more for his income than his clients, or who becomes so enamored with his skills that he forgets about the real needs of his clients. This last case represents a means–ends inversion common in Professional Bureaucracies, different from that found in Machine Bureaucracies but equally serious. In this case, the professional confuses the needs of his clients with the skills he has to offer them. He simply concentrates on the program that he favors to the exclusion of all the others—perhaps because he does it best or simply enjoys it most. This presents no problem as long as only those clients in need of that favorite program are directed his way. But should other clients slip in, trouble ensues. Thus, we have the psychiatrists who think that all patients (indeed, all people) need psychoanalysis; the consulting firms prepared to design the same planning system for all their clients, no matter how dynamic their environments; the professors who use the lecture method for classes of 500 students or five; the social workers who feel the compulsion to bring power to the people even when the people do not want it.

Dealing with this means–ends inversion is impeded by the difficulty of measuring the outputs of professional work. When psychiatrists cannot even define the words *cure* or *healthy*, how are they to prove that psychoanalysis is better for manic-depressives than chemical therapy would be? When no one has been able to measure the learning that takes place in the classroom, how can it be demonstrated with reliability that lectures are better or worse than seminars or, for that matter, than staying home and reading? That is one reason that the obvious solution to the problems of discretion—censure by the professional association—is seldom used. Another is that professionals are notoriously reluctant to act against their own—to wash their dirty linen in public, so to speak. In extreme cases, they will do so; certain behavior is too callous to ignore. But these instances are relatively rare. They do no more than expose the tip of the iceberg of misguided discretion.

Discretion not only enables some professionals to ignore the needs of their clients; it also encourages many of them to ignore the needs of the organization. Professionals in these structures do not generally consider themselves part of a team. To many, the organization is almost incidental, a convenient place to practice their skills. They are loyal to their profession, not to the place where they happen to practice it. But the organization has need for loyalty, too—to support its own strategies, to staff its administrative committees, to see it through conflicts with the professional association. Cooperation, as we saw earlier, is crucial to the functioning of the administrative structure. Yet, as we also saw, professionals resist it furiously. Professors hate to show up for curriculum meetings; they simply do not wish to be dependent on each other. One can say that they know each other only too well!

Problems of innovation

In these structures, major innovation also depends on cooperation. Existing programs can be perfected by individual specialists. But new ones usually cut across existing specialties—in essence, they require a rearrangement of the pigeonholes—and so call for interdisciplinary efforts. As a result, the reluctance of the professionals to work cooperatively with each other translates itself into problems of innovation.

Like the Machine Bureaucracy, the Professional Bureaucracy is an inflexible structure, well suited to producing its standard outputs but ill-suited to adapting to the production of new ones. All bureaucracies are geared to stable environments; they are performance structures designed to perfect programs for contingencies that can be predicted, not problem-solving ones designed to create new programs for needs that have never before been encountered.

The problems of innovation in the Professional Bureaucracy find their roots in convergent thinking, in the deductive reasoning of the professional who sees the specific situation in terms of the general concept. In the Professional Bureaucracy, this means that new problems are forced into old pigeonholes. The doctoral student in search of an interdisciplinary degree—for, after all, isn't the highest university degree meant to encourage the generation of new knowledge?—inevitably finds himself forced back into the old departmental mode. "It must be a D.B.A. or a D.Ed.; we don't offer educational administration here." Nowhere are the effects of this deductive reasoning better illustrated than in Spencer's (1976) comments, "All patients developing significant complications or death among our three hospitals . . . are reported to a central office with a narrative description of the sequence of events, with reports varying in length from a third to an entire page"; six to eight of these cases are discussed in the one-hour weekly "mortality-morbidity" conferences, including presentation of it by the surgeon and "questions and comments" by the audience (p. 1181). An "entire" page and ten minutes of discussion for cases with "significant complications"! Maybe enough to list the symptoms and slot them into pigeonholes; hardly enough even to begin to think about creative solutions. As Lucy once told Charlie Brown, great art cannot be done in half an hour; it takes at least forty-five minutes!

The fact is that great art and innovative problem solving require *inductive* reasoning—that is, the inference of new general concepts or programs from particular experiences. That kind of thinking is *divergent*—it breaks away from old routines or standards rather than perfecting existing ones. And that flies in the face of everything the Professional Bureaucracy is designed to do.

So it should come as no surprise that Professional Bureaucracies and the professional associations that control their procedures tend to be conservative bodies, hesitant to change their well-established ways. Whenever an entrepreneurial member takes up the torch of innovation, great political clashes inevitably ensue. Even in the Machine Bureaucracy, once the managers of the strategic apex finally recognize the need for change, they are able to force it down the hierarchy. In the Professional Bureaucracy, with operator autonomy and bottom-up decision making, and in the professional association with its own democratic procedures, power for strategic change is diffuse. Everybody, not just a few managers or professional representatives; must agree on the change. So change comes slowly and painfully, after much political intrigue and shrewd maneuvering by the professional and administrative entrepreneurs.

As long as the environment remains stable, the Professional Bureaucracy encounters no problem. It continues to perfect its skills and its given system of pigeonholes that slots them. But dynamic conditions call for change—new skills, new ways to slot them, and creative, cooperative efforts on the part of multidisciplinary teams of professionals. And that calls for another configuration, as we shall see in Chapter 12.

Dysfunctional responses

What responses do the problems of coordination, discretion, and innovation evoke? Most commonly, **those outside the profession—clients, nonprofessional administrators, members of the society at large and their representatives in government—see the problems as resulting from a lack of external control of the professional and of his profession. So they do the obvious: try to control the work with one of the other coordinating mechanisms. Specifically, they try to use direct supervision, standardization of work processes, or standardization of outputs.**

Direct supervision typically means imposing an intermediate level of supervision, preferably with a narrow "span of control"—in keeping with the tenets of the classical concepts of authority—to watch over the professionals. That may work in cases of gross negligence. The sloppy surgeon or the professor who misses too many classes can be "spoken to" or ultimately perhaps fired. But specific professional activities—complex in execution and vague in results—are difficult to control by anyone other than the professionals themselves. So the administrator detached from the work

and bent on direct supervision is left nothing to do except engage in bothersome exercises. As in the case of certain district supervisors who sit between one Montreal school board and its schools and, according to the reports of a number of principals, spend time telephoning them at 4:59 on Friday afternoons to ensure that they have not left early for the weekend. The imposition of such intermediate levels of supervision stems from the assumption that professional work can be controlled, like any other, in a top-down manner, an assumption that has proven false again and again.

Likewise, the other forms of standardization, instead of achieving control of the professional work, often serve merely to impede and discourage the professionals. And for the same reasons—the complexity of the work and the vagueness of its outputs. Complex work processes cannot be formalized by rules and regulations, and vague outputs cannot be standardized by planning and control systems. Except in misguided ways, which program the wrong behaviors and measure the wrong outputs, forcing the professionals to play the Machine Bureaucratic game—satisfying the standards instead of serving the clients. Back to the old means–ends inversion. Like the policeman in Chicago who described to Studs Terkel the effects of various such standards on his work:

> My supervisor would say, "We need two policy arrests, so we can be equal with the other areas." So we go out and hunt for a policy operator. . . .
>
> So many points for a robbery, so many points for a man having a gun. When they go to the scene and the man with the gun has gone, they'll lock up somebody anyway, knowing he's not the one. The record says, "Locked up two people for UUW"—unlawful use of weapons. The report will say, "When we got there, we saw these guys and they looked suspicious." They'll get a point even if the case is thrown out of court. The arrest is all that counts. (1972:137, 139–40)

Graphic illustration of the futility of trying to control work that is essentially professional in nature. Similar things happen when accountants try to control the management-consulting arms of their firms—"obedience is stressed as an end in itself because the CPA as administrator is not able to judge the non-accountant expert on the basis of that expert's knowledge" (Montagna, 1968:144). And in school systems, when the government technostructure believes it can program the work of the teacher, as in that of East Germany described proudly to this author by a government planner, where each day every child in the country ostensibly opens the same book to the same page. The individual needs of the students—slow learners and fast, rural and urban—as well as the individual styles of the teachers have to be subordinated to the neatness of the system.

The fact is that complex work cannot be effectively performed unless it comes under the control of the operator who does it. Society may have to control the overall expenditures of its Professional Bureaucracies—

to keep the lid on them—and to legislate against the most callous kinds of professional behavior. But too much external control of the professional work itself leads, according to Hypothesis 14, to centralization and formalization of the structure, in effect driving the Professional Bureaucracy to Machine Bureaucracy. The decision-making power flows from the operators to the managers, and on to the analysts of the technostructure. The effect of this is to throw the baby out with the bathwater. Technocratic controls do not improve professional-type work, nor can they distinguish between responsible and irresponsible behavior—they constrain both equally. That may, of course, be appropriate for organizations in which responsible behavior is rare. But where it is not—presumably the majority of cases—**technocratic controls only serve to dampen professional conscientiousness.**

Controls also upset the delicate relationship between the professional and his client, a relationship predicated on unimpeded personal contact between the two. Thus, Cizanckas, a police chief, notes that the police officer at the bottom of the pecking order in the "paramilitary structure" is more than willing, in turn, "to vent his frustration on the lawbreaker" (paraphrased by Hatvany, 1976:73). The controls remove the responsibility for service from the professional and place it in the administrative structure, where it is of no use to the client. It is not the government that teaches the student, not even the school system or the school itself; it is not the hospital that delivers the baby, not the police force that apprehends the criminal, not the welfare department that helps the distraught family. These things are done by the individual professional. If that professional is incompetent, no plan or rule fashioned in the technostructure, no order from an administrator can ever make him competent. But such plans, rules, and orders can impede the competent professional from providing his service effectively. At least rationalization in the Machine Bureaucracy leaves the client with inexpensive outputs. In the case of professional work, it leaves him with impersonal, ineffective service.

Furthermore, **the incentive to perfect, even to innovate—the latter weak at the best of times in Professional Bureaucracy—can be reduced by external controls.** In losing control over their own work, the professionals become passive, like the operators of the Machine Bureaucracy. Even the job of professional administrator, never easy, becomes extremely difficult when there is a push for external control. In school systems, for example, the government looks top-down to the senior managers to implement its standards, and the professionals look bottom-up to them to resist the standards. The strategic apex gets caught between a government technostructure hungry for control and an operating core hanging on to its autonomy for dear life. No one gains in the process.

Are there then no solutions to a society concerned about its Professional Bureaucracies? Financial control of Professional Bureaucracies and

legislation against irresponsible professional behavior are obviously necessary. But beyond that, must the professional be left with a blank check, free of public accountability? Solutions are available, but they grow from a recognition of professional work for what it is. **Change in the Professional Bureaucracy does not sweep in from new administrators taking office to announce major reforms, nor from government technostructures intent on bringing the professionals under their control. Rather, change seeps in by the slow process of changing the professionals—changing who can enter the profession, what they learn in its professional schools (norms as well as skills and knowledge), and thereafter how willing they are to upgrade their skills.** Where such changes are resisted, society may be best off to call on the professionals' sense of responsibility to serve the public, or, failing that, to bring pressures on the professional associations rather than on the Professional Bureaucracies.