desires. The new bureau, so established, will probably remain strictly under control for the first few years of its operation. This provides the element of truth in the statement frequently heard that administrative agencies work well only within the first five years of their establishment. The whole situation is highly paradoxical. The inefficiency of the overexpanded bureaucracy leads to still further expansion and still further inefficiency.

Most modern governmental hierarchies are much beyond their efficient organizational limits. The damaging effects on the efficiency of the whole organization caused by the addition of new elements is a function of the total size of the organization. With a very small bureaucracy, a given expansion may bring gains that more than outweigh this efficiency factor. As the apparatus grows larger, the reduction in efficiency for the whole organization that is to be expected from each additional unit will increase in magnitude. Eventually, the system will degenerate into bureaucratic free enterprise. Once this stage is reached, the effect of an addition to or a reduction from the bureaucracy will again be slight. At this level, only a radical reduction in the size of the whole apparatus, or else the specific creation of still new agencies, will get specific tasks accomplished.

The analysis here seems, to me at any rate, to suggest clearly that the stage of bureaucratic free enterprise that most modern governmental hierarchies seem to have reached is undesirable. Most observers probably agree on this count. Advocates of expansion talk either in terms of individual particularized interests or else in terms of a completely mythological coordinated administrative pyramid that can never have existed. The only counter to such arguments is a careful analysis, and, if possible, some direct contact with the actual workings of bureaucratic process within one of these administrative structures.

CHAPTER 19

THE PROBLEM OF CONTROL

In previous chapters the difficulties and complications involved in getting an organization to do what is wanted of it have been discussed at some length, but little has been said about the techniques that might be employed to minimize the effects of these difficulties. In this chapter, and in those following, I propose to examine this question.

The present discussion should indicate the sorts of problems that can be most easily met by bureaucratic organizations, and it should also give some idea as to the order of magnitude of the bureaucracy that might be applicable to each task. Chapters 21, 22, and 23 will discuss special techniques which will permit quite large organizational structures to be constructed in certain circumstances without the dangers of bureaucratic free enterprise or imperialism.

INFANTRY EXAMPLES

Let us consider the captain of a company of infantry in two different cases. In the first, he commands "left face"; and his company, ordered on a drill field, all execute the command in the prescribed manner. This is the simplest type of obedience to obtain. It is doubtful if the control of one man over a group is ever greater. The order has been issued, it requires no interpretation or application to the given situation, and the nature of the order is such that the captain has only to glance at his company to assure himself that every soldier has carried it out. It is possible to say, in this case, that only the captain thinks and reaches decisions, that only he "wills" the action: his subordinates merely carry out his decision. Even if we consider this an oversimplified interpretation of the situation—after all the troops could mutiny, and it is likely that at least one of them may make a mistake—still we must admit the captain does have exceptionally great control over his subordinates.

Now let us consider the same captain commanding the same company in a combat situation. He has sent out five patrols to obtain information about the position of the enemy. Although they constitute part of a larger pattern, each of these five patrols has its own separate mission. In addition, each will encounter its own special problems. Even if the captain could be provided with some instantaneous and secure method of communicating with each

one, he still could not give them orders in the same sense that he gave the company orders on the drill field. He cannot hope to have the knowledge of the specific situation of each patrol that the patrol leader has, and even if he had such information, he could not give to the problems of each patrol the amount of thought that the commander of that patrol can.

What the captain wants from the patrol commanders is not the simple and uncomplicated obedience which we find on the drill ground, but something much more difficult to obtain. The captain wants the leaders of his patrol to reach decisions on the host of problems with which they will be confronted which will conform to his general strategy; but he cannot tell in advance what their decisions will be. In this situation the company commander is making an attempt to multiply his mental powers by giving a task to subordinates which requires that they think and act on their own. The patrol commander, typically, will be given some general instructions as to where he is to take his patrol and what he is to look for, but there will be emergencies where it is his duty to disregard even these general instructions. In the more normal situation, he will obey the general directive, but he will have to make numerous decisions about the detailed implementation of the order.

The patrol situation has the advantage over the parade ground situation in that far more decisions can be made by the whole organization, because each of the subordinates must reach decisions in addition to the single superior. The disadvantage is that some of the decisions made by the subordinates will inevitably be contrary to the desires of the commander. From the time that a patrol leaves the lines, it is out of view of the superior officer. Patrol leaders may willfully disobey orders without being found out, or they simply may make mistakes. In yet another case, they may encounter a situation for which none of their specific orders apply. In these circumstances they may reach the wrong decision from the point of view of the unit commander.

The drill field and the patrol situations are merely points on a continuous spectrum of administrative control situations. We may designate the extreme end of the spectrum illustrated by the drill field as the "simple" situation and the situations at the opposing extreme as "complex." The simpler the task, the larger the organization which can be designed to carry it out. Tasks that are more complex will require smaller organizations if they are to be carried out effectively. A simple organization is generally limited to carrying out the decisions made by one man. More complex organizations will actually carry out a mass of decisions too large for one man to have reached. These more numerous decisions should conform to some general design if the organization

is to have any unified purpose at all, and is not to represent an example of bureaucratic free enterprise. The central problem facing most administrators is that of maximizing the number of decisions taken by subordinates that do, in fact, carry out the general "policy" of the whole organization.

All that may be hoped for here is some approximation to perfection. The first step toward bureaucratic wisdom lies in the recognition of this fact. If it is accepted, reasonably satisfactory results can be achieved through the application of statistical methods of control. This solution, which I shall discuss in detail later, may seem peculiar and radical at first glance, but it is an innovation only in its theoretical aspects. This is the method actually employed by most successful administrators.

COMMUNICATION

A sovereign in getting his inferiors to carry out his will has two central problems: communicating his desires and seeing that these are carried out.[1] These two problems are not only separable theoretically; good administration requires that every effort be made to keep them separate in practice. These two problems are, however, intermingled in many modern administrative structures, and, perhaps because of the existing situation, some analysts have concluded that such an intermingling is desirable.

The reasons why these two problems are so closely tied together deserve discussion. There are some occasions in both business and government hierarchies (many in the latter) where no clear policy for the organization has been laid down in advance. The policy, as this word is normally employed, develops out of a series of individual decisions in concrete cases. These decisions are made, in the first instance, by lower-ranking personnel. Of course, the decisions made by the higher ranks as to who among the lower ranks shall be rewarded and punished are the crucial set. To some extent, this practice is unavoidable—and it may even be desirable—but in most cases it arises because of inefficient administration.

Let us take initially a situation in which this type of intermingling between the communication and control problems cannot really be avoided. Assume that the assistants to a given sovereign normally are called upon to make decisions about various things upon which the instructions received from above are not complete and comprehensive, but assume also that it is possible to

1. The sovereign must also devote time to deciding what he wants done, but we are now concerned only with the methods of carrying out his desires; not with how he came to have them.

apply certain general principles of the organization to the decisions in each case. However, given the rush of events, new problems and issues are continually emerging which the general organizational principles cannot always be expected to cover. The subordinate, in this sort of position, will find himself occasionally confronted with issues upon which he must make an initial effective decision. If the sovereign agrees with this decision, the organizational policy may then grow out of this particular lower-level decision process. If the sovereign disagrees, no policy generalizations will emerge.

There is no way that this sort of ultimate policy formation by low-ranking personnel can be avoided; it will arise on occasion in all organizations, no matter how efficiently these are organized. The more normal case in which decisions are reached by lower-ranking personnel is, however, different. Not only the initial decision, but all subsequent decisions, may be made by men operating at the lower reaches of the hierarchy. The sovereign neither ratifies nor disapproves of these decisions, either because the chain of command is so clogged that he does not hear of the issues at all, or because he is lazy, or because he fears that any decision on his part will, in turn, annoy his own superior in the hierarchy. In such an organization as this, the lower ranks, after perhaps vainly trying to get the higher officials to take action, may be forced to make decisions. Out of a series of such events, a sort of organizational policy may develop by precedent, and the higher officials may never have to make any choices of significance at all.

It may be argued that this system is desirable on certain grounds. The common law system of judicial law making depends on a similar process, and there are admitted advantages to the common law process. The fact remains that the common law is not intended to be the result of any central organization. While it may be argued that allowing individuals to make personal decisions under the rule of *stare decisis* is a desirable means of developing a legal system, it cannot be urged that this is a desirable means of applying a centrally directed policy.

There are other organizations in which policy may appear to come from low-level decisions, but in which it actually does not. The "policy" that gives rise to this phenomenon is what might be called "administrative hypocrisy." It not infrequently happens that the "official policy" of an organization differs sharply from its real policy. Peter M. Blau's *The Dynamics of Bureaucracy*,[2] for example, examines the functioning of a state employment agency.

2. University of Chicago Press, 1955.

"Interviewers," the principal type of employee in such agencies, on being hired are subjected to a training course in the duties attached to their positions. This course has, however, virtually nothing to do with their actual duties. The training, as Blau explains, is in the theoretical policy of the agency; the actual policy is something different.

In more complex situations, the practice of administrative hypocrisy may be a major barrier to efficient operation, particularly for new employees. If the performance pattern actually expected from the employee and the "theoretical policy" of the organization are both complex, understanding the theoretical policy can only be a hindrance to the new employee. There seems to be no need here to discuss in detail the practice of administrative hypocrisy as such, except to mention that it seems to be a very common system in large organizations. Its effect, for purposes of this section, is that of giving the appearance of decisions originating in the lower levels of the organization when actually they do not. In a system of administrative hypocrisy, there are two decisions that must be made whenever a new situation is confronted. First, what must be done and, second, what is to be the rationalization of what is done. The first decision may require immediate action, but the second can frequently be deferred. Because of this lag, the lower-level officials may appear to be doing things for quite a considerable time before "policy" is formed.

There may, of course, be situations in which decisions need to be made by men at the lower reaches of the hierarchy. To the extent that this is so, the raison d'etre for the hierarchy itself ceases to exist. In the analysis that follows, therefore, I shall continue to assume, as before, that an hierarchy is an organization designed for getting centralized decisions carried out through lower-level personnel.

As suggested above, the first problem is that of communication, that of letting the lower orders of the hierarchy know what the policy (or policies) of the organization is (are). I have stated that this function, as such, should be divorced from efforts to enforce that policy. The reasons here are simple ones. Bentham, in describing the common law, referred to it as "dog law." By this he meant that the law ruled people in the same manner that a man trains a dog. The dog is punished for doing things that he ought not to do, but not, for obvious reasons, told what these things are in advance. It matters not whether Bentham's view of the common law is accurate; few will deny that if it were it would be an undesirable system. We are able to communicate with human beings, and it surely seems best to tell them in advance what is desired and then to punish or to reward them for their behavior rather than to let

them deduce what is wanted by observing which types of behavior are, in fact, rewarded and which punished.

This all seems clear. In practice, the separation is not so simple. The very reaching of general policy decisions may be difficult, and verbalizing them may be even more troublesome. But the importance of providing inferiors with clear instructions should never be overlooked, nor the fact that failure to do so will, undoubtedly, lead to a lower degree of organizational satisfaction of the sovereign's wishes.

Giving instructions is not an easy task. People seem to possess an almost infinite ability to misunderstand. The Chinese Maritime Customs, an international service organized by Sir Robert Hart, was justly renowned for its efficiency. Sir Robert was an excellent administrator, and his subordinates were mostly men of exceptional merit. Yet if one reads the circular instructions that were sent by Sir Robert to his various offices, one cannot help but be struck by the frequency with which he repeats ideas. Either he was wasting his time, or else he felt that this amount of repetition was necessary to implant his ideas into the thinking patterns of his subordinates. The latter explanation is more likely to be correct, and it seems probable that even more repetition would be required in a less "elite" organization.

The same phenomenon can be seen in the desire of most employers for "experienced" help. Many simple types of employment, restaurant waitresses, salespeople, etc., do not appear to involve any high degree of training on the part of the worker. Nevertheless, experienced people are given preferential treatment by employers. This seems to be the result of the realization by most businessmen that the time and effort which management must devote to training personnel even in such simple jobs is considerable. Here again it would appear that effectively communicating desires to subordinates is no easy task.

There are many devices that will assist the sovereign in communicating with his subordinates. Clarity of expression, repetition, apt similes, and all of the other means of "getting the message across" are of considerable importance here. Even with these devices, there will clearly exist some maximum order of complexity in a task beyond which it becomes impossible for the subordinate to form a clear idea of the desires of his superior with respect to that task. To put the same point differently, the control that may be exercised over a subordinate is limited in the first instance by the limits on the ability to communicate with him. If the superior should be lazy, or if he should not enjoy giving instructions, he must then accept the consequence that most of

his subordinates' efforts will not be closely related to the activities that he would desire to see them carry out. Either this, or the superior must be willing to confine his orders to tasks that are so simple as to require little or no instruction before they can be readily understood by subordinates. This suggests that those sovereigns are better administrators who are able to communicate effectively with other people.

Two mechanical methods of simplifying communication with subordinates may be mentioned, although these may be applied only in certain specific command situations. This means that more complex tasks may be performed by organizational hierarchies when such situations are present. The first of these mechanical means is simply that of giving the same task to all inferiors. Let us return to our model of a sovereign with four assistants. Assume that he has assigned to each of these four assistants a different field of activity. Let us say that the overall problem is that of governing an area, and that the sovereign has divided the task into the four functional areas of police, tax collection, public works, and education. If we assume that the sovereign gives one-fourth of his supervisory time to each of these areas of activity, and that this one-fourth is divided between giving instructions and seeing that these instructions are carried out in the ratio of two to three, we can compute that the sovereign would be devoting 10 per cent of his total supervisory time to giving orders to each of his assistants and 15 per cent of this time to supervising the performance of each of them. In total, 40 per cent of the sovereign's time will be devoted to giving orders and 60 per cent to enforcement.

Let us contrast this situation with one in which the sovereign, still with four assistants, limits his activities to only one field, say, police. Here he may be able to give substantially the same instructions to each of the four assistants. This implies that he can devote up to 40 per cent of his time to the careful composition and transmission of orders to his subordinates. The degree of complexity of the ideas that may be transmitted is materially increased in this way. The procedure will work, however, only with certain situations. It must be possible that the assistants do substantially the same thing without duplicating or interfering with each other. Furthermore, the total number of things that the organization might do is severely restricted.

This system is usually applied in practice through the geographic or organizational unit separation of the spheres of activity of the assistants. The sovereign in our example could have given each assistant a specific geographic area to police in accordance with a common set of instructions. A large corporation sets up a series of sales districts, each with a district manager, in

order to be able to follow the same pattern of organization. Substantially identical administrative units may be set up which do not involve geographic boundaries in order to achieve similar results. During peace time, a corps commander may deal with division commanders on this principle. In active combat, on the other hand, most of his orders must relate to the specific activities of individual divisions. Note here that the result is the reverse of what might be hoped. It is important for divisions to be able to execute complex orders in combat, yet orders that are too complex for use in wartime may be easily carried out in garrison.

The second mechanical method of simplifying the problem of communicating orders or commands also involves imposition of uniformity on the orders given, and also can be applied only in certain circumstances. In the first method the uniformity suggested extended through different parts of the hierarchy; it was uniformity in space. In the second method, the uniformity extends through time. If a task is such that the instructions required may be left unchanged or substantially unchanged for long periods of time, the instructions may be more complex than otherwise, and still be communicated to the lower ranks of the hierarchy. This is because of the simple and obvious fact that these ranks will have more time to learn these orders. This method is, of course, that of laws and regulations. Almost all hierarchical organizations, no matter how rapidly changing the situations in which they must operate, will have at least some internal regulations and standard procedures which remain more or less unchanged over considerable periods.

The scope of this method of communication is not without limits. Even with a completely stable and unchanging set of instructions, there remain limits on the complexity of these instructions, if they are to be understood and obeyed. In the Anglo-Saxon world, each man is assumed to know the law, and "ignorance of the law is no excuse." In fact, the law is so complex that no one makes any real pretense of knowing the whole of it. As a result, stories about "forgotten" laws being found are regular features of our newspapers.

CHAPTER 20

ENFORCEMENT

When the problem of communication is satisfactorily met, when the subordinate understands the orders given to him, the problem of insuring his compliance remains. The primary device depended upon to "motivate" the subordinate is the simple one of rewards and punishment. In order to award the rewards and punishments properly, however, the superior must have correct information concerning the activities of the subordinate. As we have seen, this knowledge may be very difficult to obtain. In the simplest of all cases, close order drill, no problem arises. Simple orders are matched with an equally simple "inspection" task. Unfortunately most problems of supervision are not this easy. Complexity in either the task to be carried out or in the procedures for determining whether the orders are, in fact, being obeyed is the rule. Frequently both kinds of complexity are present.

Let us suppose that the superior devotes a fourth of his total organizational time to each subordinate. The supervisor must decide on some breakdown between time spent in deciding upon and giving orders to the subordinate and time spent in insuring that there is compliance with the orders that are given. As a general rule, the more complex the task, the greater the amount of time that the supervisor must take in making the initial decisions and in issuing clear orders. This implies that less time, proportionately, is available for insuring compliance. Thus, it must be concluded that the more complex the task the less well will the orders to the subordinate be explained and the less well will his carrying out of these orders be supervised. There is a direct relationship between the inefficiency of a given organization and the complexity of the tasks that it is expected to perform.

How can the sovereign make the best use of the time that he does have available for insuring that a subordinate will carry out his orders?

First, it should be emphasized that, in the context of our model, the sovereign is supervising decisions made by the subordinate; he is not taking individual decisions himself on matters relating to the outside world.[1] He must, therefore, allow the subordinate to reach decisions in individual cases.

1. Decisions taken by a subordinate are intended, of course, to be controlled by the more general "policy" decisions previously taken by the sovereign and transmitted down the line.