

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.

If, for example, the sovereign should merely examine the facts in each of a few cases confronting the subordinate and announce the decision that he would make, he will have no way at all of checking on the behavior of his subordinate in those cases where the sovereign is occupied elsewhere.

A STATISTICAL METHOD OF CONTROL

The sovereign must rely on some criteria for judging the behavior of the subordinate on the basis of decisions that the latter has already made. Furthermore, it is clearly undesirable that the subordinate be allowed to know in advance which of his particular decisions or actions will be examined by the sovereign. If he did possess this foreknowledge, the subordinate would devote a disproportionate amount of time and effort to pleasing the sovereign for these particular cases, tending to disregard the sovereign's wishes for the remainder of his task. If there should be any pattern at all in his choice of areas to "inspect," the assistants will recognize this pattern, and they will tend to act accordingly. The sheer inability of the sovereign to investigate all of the actions and decisions of subordinates forces him to rely on some sample of these actions, and he must insure that such a sample is selected in a truly random fashion.

To some observers, a method in which the individual subordinate is not informed as to which of his actions will be subjected to close scrutiny may well seem "unfair" or "unjust." There is little to this argument provided that all assistants in a given hierarchy are treated in the same fashion. If it is accepted that the aim or objective of the sovereign is that of getting inferiors to carry out a policy, these inferiors must be kept in doubt as to which of their particular actions will be examined carefully by the sovereign. An inexperienced or misguided sovereign might, under this scheme, penalize subordinates for each deviation, but any sovereign of normal administrative intelligence should recognize that perfect compliance is not to be expected from subordinates.

This implies that any procedure for formal inspections at stated intervals and for stated criteria should be avoided. It might lead to the satisfaction of the sovereign through deceit. The United States Army has a system of regular inspections in which both the time of the inspection and the matters to be inspected are known in advance. As might be expected, units are always well prepared for each inspection, despite the fact that the same units may be seriously deficient normally. This formal inspection system has the advantage of furthering something akin to administrative hypocrisy. The higher officers

can pretend that the subordinates' level of compliance is much higher than is actually the case.

The principle stated to this point says only that the sovereign should examine the decisions of an inferior after these have been made and that the inferior should not know in advance which of his decisions are to be examined. This principle tells us nothing about the criteria that the sovereign may use to judge the decisions and actions of subordinates. One rule seems evident. The sovereign should avoid judging the actions of an inferior in an area where his own relevant knowledge is less than that of the inferior. Since, as we have shown, the inferior will, by the nature of the hierarchical structure, tend to know more about any particular instance than the sovereign, when the instance is first brought to the attention of the sovereign, this rule suggests that the sovereign must undertake some inquiry into those matters that he proposes to examine closely. Before he makes a judgment on the actions of a particular subordinate in a particular case, the sovereign must, within limits, become "expert" in that case. This rule, despite its evident validity, seems to be violated by all but the very best administrators. There is, instead, a tendency for the sovereign to assume that he already knows all that needs knowing about a particular issue. This tendency leads the sovereign to take decisions concerning the behavior of many subordinates when he does not possess sufficient information to evaluate such behavior properly.

This point is illustrated by George Kennan's comment that high-ranking foreign policy officials normally make decisions on matters about which their information is inadequate. In one sense this is true of all important decisions. The special problem emphasized here is that the superior, in his evaluation of subordinates, tends to substitute his own ill-informed outlook for that of the subordinate who might be, and probably is, better informed.

How can the sovereign find out enough about a particular case to judge properly whether his subordinate has reached a "correct" decision? He may, as one method, undertake his own investigation. But there is a less onerous method available. The subordinate may simply be requested to provide the facts for particular cases. As we have already noted, this method is not infallible since the subordinate may not provide information that will tend to cast doubt on his decision. Some distortion in the picture presented to the superior in this way would surely arise, although the degree of distortion would depend both on the personal character of the subordinate and upon the methods of supervision employed by the superior. If, as we saw in Part 2, the sovereign is known to trust his subordinates, then the inferior who is

dishonest is placed at a distinct advantage with respect to his more honest peer. If, on the other hand, the sovereign acts on the presumption that, at least for some of the time, his subordinates are likely to twist the information to some extent, this disadvantage of the honest man will be reduced. For our analysis, we shall assume that the sovereign will not rely solely on the faith that men are, by nature, good.

How, then, does the sovereign control the possibility that his inferiors may misinform him when he tries to examine the consequences of their decisions? Again the use of statistical methods seems to be suggested. If the sovereign should check up on all that is passed along to him, he would have gained nothing over his own onerous method of fact-finding. If he painstakingly checks on the factual information provided to him in a specific number of cases selected from all cases in some random fashion, then the sovereign can surely economize greatly on his time. The inferior would be confronted with a situation as follows: out of each one hundred decisions taken, the sovereign can be expected to ask me to provide him with a full accounting of the information upon which my action was taken in twenty. These twenty cases will be selected by some process that I cannot predict in advance. From among these twenty cases, the sovereign will select five, say, in which he will carefully check upon the accuracy of the information that I submit to him. Again, I have no way of knowing how these five will be selected from among the twenty. Furthermore, the sovereign will probably impose more severe sanctions on me for providing incorrect factual information than he will upon me for having reached incorrect decisions. Finally, in some cases I may expect him to carry his own investigations further than I have carried mine.

This method would seem to place what is probably the maximum practicable degree of restraint on the behavior of the inferior in an hierarchy. The sovereign must take particular care not to be led, by least resistance, to check on information that happens to be easy to check, or to check on cases in areas where his own knowledge makes him especially well qualified. Perhaps the most difficult task for the sovereign in this respect is the necessity of shunning deliberately any particular or disproportionate examination of cases in the areas of his own interest.

A unique problem is raised in those cases where the subordinate happens to be "expert" in an area where the superior is not especially well informed. Here understanding the inferior's analysis of the "facts" which led to his own decision would require an education for the sovereign in the particular field of specialization. If each subordinate should be a specialist in a different subject

field, the sovereign cannot be expected to learn all the fields. In such command situations, the sovereign will simply be unable to make an independent judgment about the decisions of his inferiors unless he can resort to "judgment by results," a method that will be discussed in the next chapter. Only if his subordinates should all operate in roughly related areas of specialization can the sovereign exercise real control under the methods discussed here.

The sovereign should, in some instances, carry an investigation much farther than the point at which the normal investigating procedure of the inferior making the decision has stopped. This will permit the sovereign to judge the efficiency of the search process itself, to judge whether the inferior stopped too soon, or put too much effort into making up his mind.

The analysis of Part 2 suggested that the sovereign will normally make arrangements with the peers of the inferior to check on the latter's activities. Such arrangements are also to be recommended normatively when we think of the efficiency of the hierarchy in carrying out its basic objectives. The telling of tales should be rewarded and encouraged if efficient administration is the end; this is the result of thinking about the administrative process, not ethical standards. If, on the other hand, the sovereign should wish to uphold ethical standards in this respect, he must be prepared to accept a less efficient organization. Ethical principles themselves often come into conflict. If it be assumed that doing one's duty consists in helping the superior carry out the goals of the hierarchy, then telling on someone may be doing this duty. Furthermore, if the sovereign's information about the behavior of inferiors is improved by such arrangements, then the whole system of rewards and punishments is likely to be more in accordance with commonly accepted ideas of "justice" than if the sovereign's information is less complete. In any case, efficient administrators will normally make some use of subordinates to report on other subordinates.

REASONABLE EXPECTATIONS

Let us now consider briefly the nature of the results that a sovereign might expect when he looks carefully into the activities of one of his assistants. That he should not expect perfection, however defined, seems obvious. No two persons will agree on the proper decision to be reached in a whole series of instances. Furthermore, the frequency with which the two people, the sovereign and the inferior, will differ is dependent on the complexity of the decision involved. In our numerical models developed earlier, it was suggested that the sovereign should be reasonably satisfied in the average case with an

equivalence of his views and that of a subordinate in three out of four events. This ratio seems reasonable for most of those situations where the degree of complexity is such as to be characterized by the term "decision making."²

In extremely complex matters, an even lower correlation between the sovereign's and the subordinate's decisions might be expected. If we allow, for purposes of analysis here, that the sovereign cannot expect much more than a three-fourths compliance ratio, he must, of course, refrain from dismissing inferiors each time that a specific decision is proven to be wrong. The sequential nature of the decision process must be kept in mind. Either the sovereign may offer large rewards and penalties to persons who, over a period of time, are relatively successful or relatively unsuccessful in reaching "correct" decisions, or else he may offer small rewards and penalties each time a decision is checked with the expectation that, over time, these rewards and penalties will average out to a reasonable pattern. The point is that, under no circumstances, should either large rewards or large penalties be tied to any particular individual decision or action.

The method of supervision that I have analyzed in this chapter is, I submit, the best available system. Little is probably to be gained by discussing various alternatives and pointing out the comparative defects. Almost all of the other proposed systems of control are based upon illusory ideas concerning the mental powers of sovereigns. These ideas are seldom verbalized, but they seem to be present implicitly in most theories of supervision and in many tables of organization. It is possible for a sovereign to organize his train in such a manner that he is deceived into believing that he achieves better results than that which can be obtained through the control procedures suggested here. In fact, the sovereign may have to show real ingenuity to avoid being seduced into thinking that his organization is more efficient than the real facts warrant.

It is also possible to organize the hierarchy in such a manner that most of the subordinates are assigned tasks that do not really involve the making of independent decisions. In this case, there may be an illusion of control over a much larger organization than that which actually exists. In the American diplomatic machine, for example, a vast amount of time is spent in writing, distributing, and reading various reports which have little effect on any decisions made by the secretary of state. Since many people are busy with

2. In fact, almost any action requires a decision. A bank teller deciding whether a signature is genuine, however, operates on a much lower level of intellectual effort than does a bank vice-president deciding whether to grant a loan.

these reports, and since these reports appear to be related to the decisions that are made, the illusion that everyone is busy creating foreign policy is widespread. Few persons realize that "the higher they get, the less they read." The same number of effective decisions could be made with a smaller organization, and the decisions would be based on equally good information. While in a smaller organization the total amount of information held by the system might be smaller, there seems no reason to think that the people who actually make decisions would be any less well informed than they are in the larger organization.

In a positive sense, the conception of the administrative process presented here seems reasonably accurate. The system seems to be that which accurately describes the manner in which efficient administrators think and act, although it is not the system which rationalizes their actions. In any event, in a normative sense, the procedure discussed here represents a meaningful objective for improvement in organizational efficiency. Surely administrative hierarchies could function more efficiently if they were explicitly constructed along the patterns outlined here.

CONTROL IN MULTI-LEVEL BUREAUCRACY

The analysis has for the most part been confined to a single-stage hierarchy: a sovereign and a set of assistants working directly under his supervision. In the larger organizations, the same principles that have been developed hold, and the position of the individual with respect to his inferiors is the same as in the single-stage system. The difference in the two cases is that, in the multistage hierarchy, the activity to be supervised at the intermediate levels is itself supervisory activity. If we assume a three-level system in which a sovereign has four assistants, each of whom, in turn, has four assistants, the sovereign will issue instructions in the way that we have previously analyzed. The assistants will then give instruction to their own assistants. These instructions of the intermediate bureaucrats will normally involve decisions concerning the divisions of the general task among their subordinates and concerning the greater detail required in the issuance of lower-level orders. These decisions by the intermediate bureaucrats must be supervised by the sovereign of the hierarchy, and he will tend to use the techniques that we have discussed above. The supervision activities of the intermediate-level bureaucrats will also follow the same general principles.

There seems to be little point in discussing more and more complex administrative pyramids. The principles of control remain identical, except that

it must be remembered that the real control exercised over the whole hierarchy by the ultimate sovereign declines steadily as the organization grows in total size. The organization depicted in the analysis is, however, an ideal one. The levels of efficiency that may be suggested by a concentration on this model organization may not be attained if administrators fail to behave rationally. Recall that we have noted previously that the sovereign may not be interested in maximizing real control; rather he may seek apparent control. The analysis here has been in terms of real control over the hierarchy.

EXISTING BUREAUCRATIC STRUCTURES

Given an acceptance of the analysis in this book, the question may be asked: How does the presently existing bureaucratic apparatus in many modern instances function at all? The answer seems to be twofold. In the first place, much of modern bureaucracy is simply a mistake. Various ends have seemed generally desirable. The question as to whether a bureaucratic hierarchy or organization could be designed to reach these desirable ends was not even raised. The bureaucracy was simply set up to accomplish things that seemed to be expedient. The continuing failures of bureaucracies are met in part by continuing reorganizations, the reasoning being that the failure has resulted from the organizational details. In part, the failures are met by concealed shifts in the objectives for the organization. As an experiment, if one examines the original arguments for the establishment of almost any government bureau and compares these arguments with those that may be currently offered for the retention of this bureau, one is likely to find that a considerable shift has occurred in the specification of the objectives that the bureau is supposed to attain. The governmental bureau becomes the permanent fixture, with the objective continually changing. Over time the vested interests of the bureaucrats themselves become more and more important in justifying the organization, although this can never be the sole argument in discussion with outsiders.³

3. I once participated in a rather large conference in which the only subject discussed was the necessity of performing certain functions if the organization concerned was not to lose a large part of its appropriation. Not only was the desirability of the functions themselves not canvassed; most people present thought them, as defined, undesirable. Needless to say, no one suggested declining the funds.

CHAPTER 21

JUDGMENT BY RESULTS

The numerous large bureaucratic organizations that can be observed to exist in the world today are not all to be explained as mistakes. There are organizational devices, available only under certain circumstances, which will permit the exercise of substantially more efficient supervision than is ordinarily possible. Many of the existing large organizations reflect the exploitation of such opportunities. This chapter will be devoted to a consideration of these methods.

RESULTS AND ACTIONS

To this point, when discussing the activities of a superior in obtaining desired decisions from his inferiors, we have implicitly assumed that the superior must consider the same set of facts as the inferior and determine the correctness or the incorrectness of the inferior's action on the basis of this consideration. The vast majority of tasks in bureaucracies demand this type of supervision. Simple tasks, such as digging a ditch, can be supervised much more easily, however, since the sovereign is interested solely in the result, in this example feet of ditch dug, and this sort of result can be readily observed. Complex tasks, unfortunately, are seldom of the type to which this system can be applied. There are, on the other hand, certain classes of situations in which it may be possible to evaluate the performance of rather complex tasks by reasonably simple methods. The large organizations which function with high degrees of efficiency normally perform this sort of tasks. In such cases, the sovereigns are able to make judgments concerning the behavior of subordinates, not through judging their *actions or decisions*, but through judging the *results of their actions*.

This procedure sounds much simpler than it actually is. It may appear that most actions, like ditch digging, can always be judged in terms of results. It is not difficult to demonstrate that this is not true. Let us assume, by way of illustration, that the American people gave the Roosevelt administration the general instruction to "improve the common good." Let us now suppose that the Roosevelt administration, as in fact it did, establishes the Social Security system. Can we then judge this particular action by its results, by its contribution to the common good? The answer is in the negative, although this