CHAPTER 17

# LIMITATIONS ON ORGANIZATIONAL TASKS

The prospects for improving organizational efficiency through the method outlined in the last few pages of Chapter 16 are severely limited. Any general organizational objective that requires some coordination among its separate aspects will simply not lend itself to the sort of factoring out that was discussed there. Thus, while the attempt to arrange the duties of the various members of the hierarchy so as to minimize the need for coordination will surely result in some improvements, this, in itself, cannot be considered to be a satisfactory solution in more than a small number of instances. There is, of course, no "solution." We shall discuss later some of the improvements in the techniques of control that might allow the sovereigns to achieve a somewhat greater degree of control, but these, too, are only applicable in special cases, despite their total importance. In general, efforts to set up administrative structures to perform sizeable tasks will always fail. An administrative structure may be set up, and it may accomplish something, but it will not perform the task for which it is designed.

The basic reason for this negative conclusion lies simply in the fact that the talents of individual human beings are all of comparable orders of magnitude. This is not to deny that there are great differences among men in their capacities to carry out various tasks. As we have seen, men who rise to the top of a hierarchy are likely to be, on the average, much more capable than those who remain at the lower levels. There is also, in all probability, a considerable difference in talent among the members of a hierarchy at each particular level. But the difference in ability between a superior politician and an inferior is seldom great enough to permit the administrative structure to perform in the manner that the prevailing mythology would suggest.

Most governmental tables of organization would, if taken literally, require a level of talent for the higher officials hundreds of times as great as for the lower-ranking personnel. This point may be demonstrated by taking almost any governmental structure and considering the problem of supervising a lower-level official. For purposes of analysis, assume for the moment that the superior is not in any way more talented than the man whom he is supposed to supervise. Assume also that there is no easy way to determine, by examining the results of his work, whether or not the subordinate has carried out





this work properly. Under these assumptions, it would take the superior as long to obtain information and to make up his mind as it would for the inferior to do so. Then, if the superior is to insure that the inferior does exactly what is required of him, the superior would have to put the same amount of time into supervision that the inferior does to performing the task. Thus, if the superiors at the lower levels are normally given two inferiors to supervise, they would have to be almost two times as capable as those whom they supervise. If they have three subordinates, almost three times as capable, etc., the officials at the next highest level would have to show a similar degree of superiority over their own subordinates, and so on up to the top of the hierarchy. Obviously, this degree of differentiation in talent is impossible. No one expects the higher officials to know more than a small fraction of the things that the organization is actually doing.

In practice, high-level officials frequently demonstrate publicly the most egregious ignorance concerning the area that they allegedly supervise. The first battle of Ypres, in the fall of 1914, for example, occurred as a result of decisions made by both Allied and German high commands, decisions to start an offensive at the same place and at the same time. Joffre's offensive was a decidedly modest one, with the troops consisting largely of the small British Expeditionary Corps. Falkenhayn, who had replaced von Moltke after the failure on the Marne, had much bigger ideas and threw major forces into the area. The result was that the English, instead of advancing, found themselves desperately clinging to their original positions. The courage and military skill exhibited by the English was exemplary, but this is not the point of the story. For several days after the Germans had started their attack, when the British were holding their positions only by the skin of their teeth, Joffre and French, the commander of the British force, went on issuing orders to "continue the advance." It took nearly a week for them to realize that their own forces were defending, not attacking.

In spite of the opportunity to learn about the geography of Ypres during three years of war, by 1917 the British high command had not yet discovered that it was an exceptionally muddy area. The mud turned the third battle of Ypres into a nightmare, which seems to have completely escaped the notice of the staff until after the battle when the chief of staff, at last visiting the area, exclaimed: "Good God! Did we really send men to fight in that?"

Nor are such exhibitions of ignorance confined to the military. One of the reasons for the North Koreans' initiating hostilities in Korea, and the principal reason for their early successes, was the extreme weakness of the Army of

the Republic of Korea. One—only one—of the reasons for this weakness was American government policy. The American government officials implementing our policy in Korea feared that President Rhee, if he had the military means, would attack north. They therefore decided to keep his army so weak that this course of action would be impossible. Obviously, this was a foreign-policy decision of great importance, and one which, regardless of whether it was right or wrong, had very serious consequences for the United States. Acheson, who was our secretary of state at the time, was heavily involved in Asiatic problems and had taken an active part in setting up our aid program for Korea. Yet at the MacArthur hearings, he testified that restricting the power of the Korean army had never been the policy of the American government, and that he had never even heard the policy advocated. (The facts, as in the battle of Ypres, had been widely reported in the press.) Acheson may, of course, have been deliberately lying, but it seems equally probable that he actually did not know what policy was being followed by his subordinates. If so, this would provide another illustration of the impossibility for the administrator of a large hierarchy to retain control over the organization.

Accordingly, we see that, in practice as well as in theory, there are very distinct limits to the supervisory capacity of a high-ranking official (or of the electorate in a democracy). These limits, it should be emphasized, are *limits on what can be done*, not on the size of the bureaucracies that can be built. Furthermore, these limits are much lower if the task to be accomplished requires a high degree of coordination than if it does not.

## HUMAN FRAILTY

Any statement implying limitations on human capacities seems likely to be criticized. It remains an article of faith with many people that the human society can accomplish anything. The analysis here, of course, provides no evidence for or against this basic proposition. The capabilities of the human race have, in fact, increased tremendously in the last few centuries, but this does not prove that there are no limits ahead of us. A debate on this particular subject is as absurd as a tribe of Australian Blackfellows who had explored one hundred miles in all directions from their tribal area and had found nothing but "bush" discussing whether the "bush" went on forever. There is no need for this sort of metaphysical discussion about the limits to human capacities. The limitations that I am analyzing here restrict only what can be done *with a certain specific technique*. Further, these limitations are themselves based on essentially human factors, i.e., human desires.



The belief that each human being is an entity with desire and capacities of his own, and that he will make efforts, possibly feeble ones, to bend his environment to suit his desires is not at all a belief that belittles man. Yet this belief is all that is necessary in order to develop the concept of limitations on the functioning of organizations. The superior will try to bend his inferiors, to change the environment in the direction that he wants. The inferior will do the same thing, and the superior and his desires will form a part—but only a part—of the environment as the inferior sees it. A superior may be capable of controlling completely some individual inferior; but he will be, in almost all cases, outnumbered and incapable of controlling the activities of the total number of inferiors. He can, at best, exert an influence over them; just as they can influence him in return. The superior's influence over his inferiors will steadily decline as the number of inferiors increases, while he will find himself more and more influenced in his own decisions by their actions and desires. The limits are not the limits on the power of the human being, or the human race, but limitations on the power of individuals and groups to influence the actions of other individuals and groups.

## NON-ORGANIZATIONAL TECHNIQUES

Furthermore, as suggested above, I am discussing here only one technique of influencing the behavior of others, the organizational hierarchy. One of the most influential men who ever lived was Mohammed. Most of his influence, however, was exerted after his death when he could hardly have headed an hierarchic organization. Although he did build an hierarchy before he died, his post-death influence was less pronounced in the development of that hierarchy than in almost any other aspect of Islam. The successor Mohammed chose was eliminated, his family was substantially exterminated, and the caliphate eventually fell into the hands of the Abbasids, descendants of one of Mohammed's great enemies. In other areas his influence was great, and remains important to the present day.

This book itself represents, to some degree at least, a modest attempt to influence people by non-organizational techniques. The point is that there exist other means than organized hierarchy through which influence over people may be secured. On occasion, the head of an hierarchical organization becomes also a "charismatic" leader, and he may use the hierarchy to carry out his commands. But this would seem to be exceptional. No sovereign at the apex of an administrative pyramid can depend on such means to control his followers. In fact, it is normally because he cannot influence others in this

manner that the sovereign decides to construct the organizational hierarchy. The head of General Motors or the Department of the Interior cannot depend on exerting the fascination over his followers that has been successfully employed by Father Divine.[1] He must rely on more humdrum, and often less effective, techniques. This book is about such humdrum techniques, not about the more exciting methods used by certain exceptional people with special talents (and, I suspect, extremely good luck).

## THE MARKET MECHANISM AS A TECHNIQUE FOR COORDINATION

The analysis has demonstrated that a high degree of coordination among the separate aspects of a task or set of tasks is impossible to achieve through the mechanism of an organized hierarchy. Society does possess, however, other methods of achieving coordination, and one method in particular needs to be noted here. The market is in one sense an organization, but it is to be distinguished sharply from the hierarchical type of organization discussed in this book. As an institution or an organization, the market in reality is likely to be far from perfect in its operations. Individuals will make mistakes, and the result will involve wastage of resources. But it surely seems true that no comparable mechanism even approaches the market in terms of functional efficiency. There is no place here for a treatise on economics, and the student may be referred to any standard textbook, but it will be useful to provide a comparative illustration of an administrative and a market organization.

The United States Army owns a tremendous number of motor vehicles, ranging from jeeps and motorcycles to the special carriers for "atomic cannon." Leaving aside the strictly special-purpose vehicles, these vehicles are purchased in standardized lots of large size. Instead of buying from a number of manufacturers each year, an order for the entire requirement will be given to one manufacturer who will then produce all of the trucks of a given type to specifications without model changes.[2] These vehicles, after purchase, are distributed among the various army units in a standardized manner. Efforts, not always successful, are made to insure that, say, all of the trucks

1. Even Father Divine felt that his "charisma" needed the fortification of an organizational machine and built a very good one.

2. Actually, small improvements are incorporated in the design from time to time, but "in principle" the design remains unchanged.



of the 502nd truck battalion are of the same model. The purpose of this standardization is, of course, that of simplifying the problems of repair and spare parts. A further system for simplifying these same problems is that of the motor pool. Each unit will keep its vehicles in a motor pool when they are not in use, and this pool will have repair facilities. All routine maintenance and repair work is done in the motor pool, and vehicles are normally used within the area in which the pool itself is located. For more complex overhauls, vehicles may be sent to the more complicated repair facilities maintained, usually, by some ordnance unit which is a part of the command structure above the unit possessing the single motor pool.

This system does serve to minimize the problem of spare parts. The number of types of vehicles for the army as a whole and for each motor pool is minimized. Each motor pool has full knowledge of the number of vehicles that it must keep in repair, and the make and model of these vehicles are known in advance. Furthermore, the design of military vehicles is such that ruggedness and simplicity are stressed; these additional factors minimize the repair problem generally.

In spite of all these favorable factors, however, the problem of spare parts for army vehicles has, at times, seemed to be almost insoluble. The task would seem simple. Parts should be purchased from the manufacturers, shipped along to the appropriate major depots, then shipped to the subordinate depots, which, in turn, pass them along to the ultimate consumer, the motor pools. In practice, the problem has proved extremely difficult. Vehicles were continually held out of use because parts were not available; all this despite the large sums spent on maintaining parts inventories. Add to this the complication that vehicles become obsolete and are discarded. Each time that this happens, vast supplies of spare parts for the abandoned vehicles are found in the various depots. The difficulty clearly lies in the task of getting the spare parts to the vehicles that need them.

The spare parts problem has bothered the military organizations since the end of World War II, and various expedients have been tried. Consultants of many sorts, particularly economists, have been called in to advise, and numerous organizational changes have been made. If anything, the problem has probably gotten worse rather than better. Currently, a large computer is being employed. This computer stores in its memory the inventories of all depots, and it will send orders directly to each depot for the movement of parts. This problem is, of course, "made to order" for a computer, and there is no reason to be skeptical of the results that this method might achieve.

In this particular case, the use of the large computer eliminates some of the problems involved in coordinating the actions of large numbers of people in an hierarchic organization.[3] Through this method, the hierarchy is, in fact, abolished. From the standpoint of the computer, there are no intermediaries between the top and the bottom of the structure. The computer will receive the information from the lowest level, and it will send orders direct to each depot. The distortion that is involved in transmitting reports and orders through channels will thereby be abolished. Also, orders from the computer will be of the most elementary character: "Ship 500 spark plugs to depot 78"; "Order 5,000 tires from the Firestone company," etc. These orders will be based on reports concerning the amount of stock on hand; these reports will be of an equally uncomplicated nature. Nevertheless, the computer will rely on the normal chain-of-command techniques to make certain that the depots inform it properly of their inventories and obey its commands. To this extent, the computer is dependent for its functioning on a conventional bureaucracy and to this extent it is fallible.

Let us contrast this rather dismal picture, which is only slightly brightened by the introduction of modern computer techniques, with the supply of truck parts through an ordinary market mechanism. In the United States, trucks are not particularly standardized, either in design or by fleets. Furthermore, they frequently make long trips, San Francisco to Chicago, for example, and they require repairs in many cases far from their home shops. Spare parts are distributed through a chain of jobbers and wholesalers to parts supply houses and "truck stops." They are obtained by the truck company (or by the truck driver if he is away from base) by direct purchase, usually by individual items. The problems of operating this far more complicated system efficiently would seem insurmountable looked at from the standpoint of the comparable military problem. Even larger computers would seem to be necessary here.

In fact, however, little or no difficulty is encountered. The total number of parts in the "pipeline" between manufacturers and trucks is, by military standards, very small. Yet trucks are seldom idle for any significant period of time because of the unavailability of spare parts. This despite the fact that the total number of parts of different kinds far exceeds the number needed by the more standardized military vehicles, and despite the fact that these parts are distributed through a much greater number of "depots." I shall not here

3. The "span of control" is enlarged to several thousand in this case.



discuss the details of the mechanism through which this is accomplished. This is best left to the economists. The point here is that there do exist non-bureaucratic methods for coordinating the activities of human beings which may be more efficient than bureaucratic methods.

This is not to suggest that there are market solutions for every problem, or that these should be recommended if they do exist. While there certainly are governmental functions, such as the post office, that are in the public sector primarily by historic accident, the bulk of the traditional governmental functions are not suitable for market organizations. For example, it is difficult to imagine how the police services could be organized along market lines. And even with the vehicle parts for the military, there is no suggestion here that it would be wise to shift to a market-organized method of supply. Military organizations are, however, making more and more usage of market techniques, and, in many cases, they are occupied with creating market-like situations even when effective market organization is not possible.

The problem of coordination is difficult at best, and the advantage as well as the disadvantage of all methods must be thoroughly understood before organizational decisions can be properly made.