

to feel the necessity for coördination of some kind, but are still a little in the dark as to just what ought to be, be kind to them, don't rub it in. Then there are three things you can do. First, there are things you can do that they are not now doing, and as long as they are not now doing them they won't object to your doing them. Believe me, in every situation in Washington that needs correlation not over ten per cent of the allotted field is covered, so that any such one agency that is appointed to correlate them has ninety per cent of the field in which to operate without treading on anything that is now being done. The second thing you can do is to give your help where they want help, and I do not know any five agencies that ought to be correlated that do not want more help than any living man or group of men can give them. And then, three, you can make studies of existing practice. Nobody refuses in a democracy to let you come in for study.

I have not met any group of agencies in Washington that by the end of three months will not follow any lead developed along these lines. But to start in on the assumption that they are wrong, or that they can immediately accommodate themselves to the wish or the order of somebody above, I think is a mistake.

I am going to read the final paragraph in this memorandum:

"If the industrial activities of our military establishment are to be carried on with the maximum of effectiveness and with the minimum of dictation from the top, growth along distinct lines is necessary. We must develop in every unit of organization a desire for a common leadership and an ability to respond to that leadership when it is intelligent and sometimes when it is not. But more important even than this, we must develop as our leaders men who see their capacity for leadership conditioned by the loyalty of those whom they seek to lead, and they must be men to whom facts are as masters. The top controls which must necessarily be established if your military activities are to be coördinated will be unlike anything in industry. It will be the function of these super-organizations to seek out the inner theories of action, to enunciate policies, and perhaps to record performance. But administrative responsibility in the end will rest with units altogether too large to consolidate.

"The organization of any top control can, in my opinion, only proceed as we develop the organization of each of the units, the activities of which are to be correlated. To work from the top without providing at the same time for a response from below is altogether un-American and unworkable. No one in this country has authority of this kind.

"To seek to formulate the boundaries of this type of action is a timely activity for this Society."

MR. M. C. TUTTLE:¹ I am reminded that it is difficult to play a solo on a tin whistle after a trombone has just finished.

When an industrial concern is confronted with a sudden increase in its volume of work the management considers two possible courses; first, the hiring of more employees, and next, the delegating to other companies parts of the work, using its own organization to divide the work into the components which are to be done by its original force and those which are to be assigned to outsiders. Architects, lawyers, engineers, and accountants, beside their technical training, offer the opportunities for obtaining such emergency help.

A large business confronted with a sudden increase or wishing to go into a new class of work may buy a smaller one, and make it into a department. The shoe trade has commonly done this with selling houses.

These going organizations are taken because of the lack of time in which to organize and train new ones. If a manufacturer decides to discontinue selling through a commission house and in place of it proposes the creation of a selling department, he must be sure that this new department can sell goods in quantity enough and soon enough to keep his concern prosperous. The sure way of doing this is to buy the selling organization which is handling his output. If he has suddenly to carry through contracts for engineering work, it will be safer for him to hire an engineering concern than to try to do it by hiring an individual engineer and letting him engage draftsmen and supervisors.

We have all had the experience of building a new department with men who have succeeded in other places, and found the new combination unable to handle its work. We have turned this work over to a trained team of men and seen it done easily.

It is a common experience to find an organization successfully using a man who has proved impossible in other surroundings.

At this point I am reminded to tell you a story of Puck O'Hearn, of my own organization. He is addicted to the liquor habit. He is a most excellent laborer, a skilled man, and as long as he lets liquor alone he is a valuable workman. Realizing his value to us, we tried to do what we could to keep him away

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from too much drink. We found a very severe landlady, and we got Puck to live at her house. We gave him \$7 a week and kept the rest of his money. Under these conditions Puck is an extremely satisfactory workman. He showed up at the end of a long job at the office on one occasion and asked for me. He said, "Mr. Tuttle, I want my money." I asked the bookkeeper how much he had coming to him and he told me that he had \$95 due him. Now it is a crime and a civic calamity to let Puck have \$95 at one time, and I told him he could not have it, that I would give him \$10. He said, "Mr. Tuttle, the fact is that I have contracted to buy a horse, and I have to pay for it today." I said, "It is a shame, but I suppose the money is yours, so go to it," and I paid him his money. He came in four days later about the saddest looking laborer that I ever saw in my life; the world had certainly used him roughly. Apparently everything had happened to him that I expected would happen, and more, too. I asked him about his horse. He stood up there erect as ever, back of the rail, and he said, "Mr. Tuttle, the horse is dead." (Laughter.)

Now that is a man who would be uncomfortable in other surroundings, he would not fit organizations suddenly got together which depended upon him, because they would not have his personal equation. It is the team work, it is the understanding, the spirit that makes these organizations effective; and those things are the result of time, there is hardly anything else that will do it. Leadership will do it somewhat, but those things are essentially the product of time. Men recognize the value of that sort of thing, and refuse to work under new, untried surroundings, for the fear that they will fail under the new conditions. It is almost as common to find men failing simply because they are placed wrong. Time and freedom to move are the common cures of such wrong placing.

It is the team work, the mutual understanding, the spirit, the effects of time, that make the differences between these successes and these failures.

Men recognize the value of this team work and hesitate before making new combinations, lest their reputations suffer through inability to do their best through new combinations.

The point of all this is that at this time of war the government faces the choice of dismembering going organizations and from the parts building for itself new organizations which will be placed in new surroundings under strange conditions. In these new surroundings the new group will be given a huge load to carry. It may be worth while to think carefully of the results that can be obtained, say in buying or engineering or accounting if work is assigned to going

organizations which can be hired by the government to do assigned parts of the government work. We know buying organizations which could buy well much of the material now needed. We know engineering firms which could design quickly and economically works now needed. The problem clearly before us is how to save days. Add to this a saving of dollars and still more must we consider the use of the going concern, the marshalling of proved efficiency, rather than the increase of numbers and of the problems of the design of a machine while its output is needed.

MR. ORDWAY TEAD:¹ Mr. Chairman, ladies and gentlemen, anybody who has to discuss this question needs to preface it by an expression of humility in the face of the far-reaching and complex problems we today face. I want to offer that expression at the outset.

I have recently had occasion in connection with the preparation of a course I am to give at Columbia, to look into what the books have to say about the first principles of organization, and therefore of government. And it is interesting to note how the practical work in Washington has brought the views of Mr. Cooke and Mr. Kendall into substantial agreement with those expressed by the most recent theoretical writers both on the question of the essential basis of human organization and on the principles which underlie sound operation within any organization.

Let me therefore state what it seems to me are the principles which underlie what both Mr. Kendall and Mr. Cooke have said; state in slightly different terms the principles of sound organization.

The first of these would be that organization must at all times be in terms of a *function* to be performed. This is simply another way of saying that where there is a job to be done there must be created an organization competent to do the job. Stated abstractedly this seems so obvious as to be unnecessary to remark. Yet the principle of organization on a basis of function means, it seems to me, that in the last analysis you reconcile the principle of centralization of authority with the values to be derived by a measure of decentralized control. For as regards each task to be undertaken we should ask these two questions: What is the scope, range and nature of the task? And is an organization contemplated which is sufficiently extensive to carry out this scope and yet so controlled as to assure that the work is to be done with the full-

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