

obtain that size by a process of trial and error, of successive approximations.

I have always found that the optimum size problem is clarified if we consider the functions separately. There is very little question, for example, about the proper operating size of a unit to assemble an automobile or similar object. The quantity to be produced can be figured and a balanced unit worked out. That unit, for a simple product, might conceivably be a half dozen machines. That unit would not, however, be balanced from the standpoint of supervision. It would therefore be necessary to work out a combination of small machine groups that would make up a balanced unit from that standpoint. This same process can be carried through the whole organization. The units economical for the performance of the function get larger as we get into the fields of distribution and finance. There is probably hardly a limit to the size of organization that can be brought together to produce a balanced unit from the standpoint of financial and general executive control.

There are other reasons for large organizations. The large unit possesses fighting strength and permits the more effective use of reserves. Consolidations often result from a desire on the part of the members to submit each other to restraints on conflicting interests and activities, akin to the restraints of political government.

On the other hand, as the size of the organization increases, the functional losses involved in transporting materials and communicating ideas between the parts of the organization, become very great. The existence of these losses indicates that an organization should be kept as small as is consistent with balanced and economical performance.

Disruptive forces tend also to accumulate because of organization strains on individual purposes.

There is also, as many others have said, a very definite optimum limit to the number of matters which an individual can handle. It seems to me that our limits are set at that point and that our progress must be along the lines of more effective group control. Something like the dominion plan of Great Britain is being used by our large corporations.

Gorton James.<sup>14</sup> I want to put just two thoughts before the group. We have been talking about

<sup>14</sup>Editor, *Business Week*, McGraw-Hill Publishing Company, New York.

scientific measures of control making possible growth in the size of organizations. The most important measure of optimum size, which has only been suggested so far, is profits. I remember being greatly impressed a number of years ago when A. T. Simmons pointed to the banana stand as the organization giving the greatest return for the amount of money invested. He attempted to organize his business on the general idea that the small unit had the opportunity of control which made for the greatest profit-getting business. Personality has been spoken of as limiting size. This is true but it is not the only limiting factor. The other is the possibility of profits. I am thinking of a hardware wholesaler that we studied in Washington. He was a capable business man but he was extending his business to the point where he was getting less return for the amount of money invested than he had been getting with less business. When he came to set up measures by which he could for the first time find out the cost of his individual operations, he discovered that about one-third of the territory he was trying to cover was costing him more than the return from sales. By withdrawing his efforts from that territory he made a higher percentage of profit, and in fact, more actual profit. There is a definite limit to size quite apart from personalities.

I want to mention also the social aspects of the question, which have not been touched upon. The bigger the enterprise, the bigger the problems, and the net result in the case of ordinary men is to make them more and more careful and conservative. It is a question as to whether it is not necessary from the social standpoint to have the smaller concerns as well as the larger, if we want to maintain our present rate of progress. So much attention is being given to the advantages and efficiencies to be derived from size with control that we are losing sight of the importance of the smaller organizations as producers of new ideas and inventions. As an illustration of what I mean let me cite a case: On the way over to this meeting I was discussing the management societies—the Taylor Society, the American Management Association, the Society of Industrial Engineers. My companion suggested that a combination of all three would be much more powerful and effective than the present situation. I questioned whether that is true. The main purpose of these societies is to generate ideas. If we

had one group we would have only one group generating ideas, whereas the three different organizations have three times as much power to generate ideas. The same is true in business organizations. By having many units we have many people striving toward increased efficiency and the improvement of business methods. The chances are that from many such units, provided they are well organized, we shall have greater generation of ideas than if these units were all combined in one grand powerful organization.

Henry P. Kendall.<sup>15</sup> I gather from some of the discussion of the morning that the word "optimum" has been confused with "maximum." If I remember my Latin correctly it has reference to the best rather than the biggest. In our company we are not thinking about size in terms of maximums. We are putting our efforts into determining the minimum size; that is, the minimum size of a department, a plant, or a group of plants at which a given result can be accomplished at lowest cost. When you are in the business of running cotton mills you have to ask whether a 15-, 30-, 50-, 75-, or 150-thousand spindle mill is the minimum size that is going to be competitively successful.

When we have determined these minimum sizes we have the problem of developing markets to enable us to operate at these minimum sizes. When we have done this we do not worry about the fellow who has a business two or three times the size of ours.

It seems to me that this is the side of the question which closely relates itself to optimum.

H. S. Person.<sup>16</sup> I should like the privilege of focusing the points of discussion that have been made here this morning, because the value we get out of these meetings lies in what we think after we have left them.

It seems to me that there have been three main classes of thought expressed here. The first holds that the main problem is psychological; the second, that it can be solved through instruments of control, and the third, that it is a responsibility of management.

I agree with those who emphasize psychology. But if we resolve the psychological problem of size

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<sup>16</sup>Managing Director, Taylor Society, New York.

into one of the development of understanding throughout enterprise, then do not the various instruments of control help to resolve this problem of understanding, and is this not the responsibility of management? If we concede that there is no limit to the size of markets, then the problem of optimum size of organization is one of resolving the human and psychological elements through scientific instruments, developed by management itself.

That line of thought explains the set-up of the program this morning. These two subjects were put together because, before we can adequately discuss this problem of size, we must have some concept of the relative areas of the known and unknown, or the controllable and uncontrollable, resulting from the utilization of these instruments of measurement that we have been discussing this morning.

#### Closure

Joseph H. Barber. I shall carry back to Mr. Coonley, with considerable interest to him, I know, many of the points brought out in discussion this morning. He has a sense of humor and I know he will appreciate what Mr. Silcox said about our signing contracts as though things were controllable!

One point I do want to clear up. I am sure he did not mean to imply that we shall not need personality in the leadership of the future. He meant to say that we shall need a different kind of personality. The old type of executive, and to a large extent the present type, thinks of himself as reaching out into the air for a decision. His job is to make decisions. Mr. Coonley believes that in the future the executive's job will be to make analyses. Decisions will almost take care of themselves.

John H. Williams. Much has been said this morning of the psychological aspects of these problems. I was reminded, as I listened, of a case I once handled. The people who consulted me evidently thought I should have an opinion to hand them immediately. I said to them, in substance: "You gentlemen are the principal people in this business now; you are dominating it. Do you want to continue to dominate it or do you want to make the business the thing? Which is the real objective, you yourselves or the business?"

That sums up a lot of this psychological business.