

rived at." Complete openness is indeed the sunshine of a business organization, bringing health and vitality.

Mr. Schulze says: "The objectives of the business in concrete terms are shown to be profits and financial stability. Administrative planning must definitely lead to these two goals." This statement is perhaps the most open to adverse criticism. He has confused the objective with one of the means of measuring progress towards the objective. Business is organized human effort for the satisfaction of human wants. The primary human want is growth, with freedom to express, i. e. "press out" that which is within. It is because of this inner urge for outer expression of life in ever greater variety and fullness that man finds joy in exerting his labor on nature for the production of goods and services. The profit shown on the balance sheet and income account is only a way of measuring the success of man's efforts in the mastery of natural forces. It can never measure the goal of man's own happiness and satisfaction.

His statement, taken at its face value, would indicate a dangerous and essentially destructive philosophy which I know Mr. Schulze does not hold. I point it out because I am sure he does not want to be misinterpreted on such a vital matter. It is because business has been run with profit as its objective, and has ignored its primary purpose of expanding the life of every participant, that industrial conditions and strife have reached the acute stage in which we find them today.

We members of the Taylor Society are human beings searching for the truth and its expression. As I look back over our various meetings, it seems clear that many of our most heated discussions have been the most productive of our healthy growth. Let us, then, be willing — even eager — to enter upon controversial ground, if by so doing we can get closer to and help clear up the fundamentals.

DWIGHT T. FARNHAM¹: As a preface to a question I should like to ask Mr. Schulze, I should like to say that while I was in Chicago last week, I was talking with a man who is president of a large coal company, who for about four years has been carrying out very carefully what Mr. Schulze has described. For some years he has been running a graph with which he plans the profits to be realized in his coal business. We all know that the coal business is very uncertain, and especially has been so during the last few years.

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In spite of such conditions, however, this man has been carrying one curve in black which gives the standard profit, and following that month by month with a curve in red showing the actual profit; and those two curves have run unbelievably close to each other. He even goes to one of the large Chicago banks and does his financing on the basis of a curve showing the predicted seasonal income and expenditure. Altogether he is carrying out in a very practical way just what Mr. Schulze has described.

The question I want to ask Mr. Schulze is, whether he has two headings in his graph at the right hand side — quantity and cost? In his talk he also mentioned what you make, or the nature of the product. I would like to ask whether he includes under such things as quality, the organization of the inspection department, the establishment of standards of quality in which possibly the sales department, the laboratory, or the factory would get together and decide upon what is a proper quality for the customer to be asked to accept?

CARL G. BARTH¹: It appears that Mr. Schulze has in mind carrying the scheme of analyzing, planning and functionalizing the duties and work of an organization much further than anybody has thought of doing heretofore. He at least suggests the possibility of going much further than anything I have ever personally been able to put over.

The nearest approach to it that has come to my attention was accomplished and put into effect by Mr. J. E. Otterson, our past president, in reorganizing the Winchester Repeating Arms Company, during the war; and I have no doubt that he has since carried his ideas still further. In the first place, Mr. Otterson subdivided what Mr. Taylor in a broad sense understood by planning as against execution, into:

1. *Planning* in a narrower sense; deciding on how execution of the work should be carried out.
2. *Preparation*: Physically preparing the way for the eventual execution of the work in accordance with the plans made.
3. *Scheduling*: Deciding on when the execution should be taken up and carried through on completion of the necessary preparation. After this followed:
 - a. *Production*: Execution; made possible and easy because of the planning and preparation that preceded.
 - b. *Inspection*: Final inspection, as distinguished from first or preliminary inspection.

He thus worked on the basis that every department,

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whether productive in the narrow sense, or administrative, exists for the purpose of turning out, in a broad sense, a certain product (accomplish certain definite results). He thus early and successfully applied the idea of distinguishing between planning and execution in accordance with his own scheme as just stated above, to the purchasing and other kindred departments¹, in which he functionalized the work to an extent that of course would not be practicable in any but a very large concern.

It should be realized, however, that a thorough analysis of the work in any department is of the greatest value, even if a department is so small that each and every one of the various functions which in a large department would be performed by a single individual or more, must be left to the same person.

I am glad that Mr. Cooke called attention to the fact that Mr. Taylor himself, at times when the opportunity presented itself, carried his ideas of analyzing and functionalizing work and duties and setting tasks much further than most of his real and fancied followers know. Thus, for instance, some men who otherwise know a good deal about his work, have no idea that Mr. Taylor was also the originator of what has come to be known as interlocking cost accounting, though he never used that term.

That he acknowledged no limits to the application of his principles is demonstrated by his assertion that:

¹The fundamental idea of the Winchester organization seems to be that the organization as a whole, and in turn each major departmental organization, breaks down into the five functions enumerated by Mr. Barth. For illustration, the organization as a whole is divided into the following major functional departments:

1. *Planning*: Involving sale research and investigation and formulation of sales policy; selection of new products and styles; determination of distribution methods and agencies; determination of selling prices; maintenance and supervision of sales force; preparation of orders and schedule for maintenance of stock of finished goods; sales engineering and sales production statistics; standardizing of salesmen's methods and equipment, etc.
2. *Preparation*: Involving technical design of products; development of processes and specifications; designing and maintenance of machinery; development of organization systems and methods, etc.
3. *Scheduling*: Involving coordination of sales, engineering, production and financial schedules; preparation and follow-up of control schedules, etc.
4. *Production*: Involving purchase of materials; employment of labor; personnel supervision, records and welfare; determination of wage standards; maintenance of production schedules; maintenance of plant; maintenance of process and system standards, etc.
5. *Inspection*: Involving auditing, accounting, inventories, progress records, etc.

This extension of Mr. Taylor's analysis of functions, and its application to the organization in the large, is undoubtedly one of the most significant contributions to the science and the art of management in recent years. (Ed.)

It is the business of a management eventually to provide everybody connected with an organization with a daily task, to see to it that he or she has the means and opportunity to perform that task, that a suitable reward is made for its accomplishment and that some sort of punishment is meted out in case of failure.

That takes in everybody from the president down to the man who sweeps the floor.

F. G. COBURN¹: Mr. Taylor brought to everybody's attention the fact that the fundamental principles of good management are applicable to any work, particularly to the management of the factory; and showed how to do it. His illustrations were all drawn from details, and many people failed to see that he was stating them as illustrations and was talking about principles and their general application. Therefore, this is a useful paper because it is well designed to bring this point to general attention.

J. WILLIAM SCHULZE: I don't want any misconceptions or misinterpretations to remain in the minds of the audience as to what I meant when I said that the two definite, concrete objectives of the business were increased profits and financial stability. At the top of the chart you will find the panel covering the broad policies of a business. These policies control the profit working functions, and I think I emphasized in the paper that it is essential that profits be controlled by broader considerations.

It is my conception, and I should like to make this clear, that it is the duty of the administrative officials to operate their business with respect to both profits and finances as not to run counter to the more basic policies regarding the human element in their business; so as not to come into conflict with the laws of ethics and policies in which the body politic is interested.

The concrete, definite objects of running a business today, the brass tacks in which you and I who are running a business are interested, within the scope of these broader policies, is to see that the business is profitable and to see that it is in financially sound condition after the year is over. The two things are not out of harmony with each other. One comes within the other. That is the reason I put the broader policies at the top and the others at the bottom of the chart.

I should like also to say a word in answer to Mr. Drury. I agree that the natural evolutionary result of additional planning will be to reduce the field of administration and to enlarge the field of management by drawing from one to the other. At the same time, there is an element of administration which exists not only at the top of the business, looking at it from a departmental standpoint, but also within each depart-

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