

conceived the application of scientific methods to the study of management and made possible a rational philosophy of management rather than details of principles and mechanism, which gives Mr. Taylor an important place in history.

This Society cannot honor itself more or give greater tribute to Mr. Taylor's memory than by retaining its present name. However, in so doing it assumes the obligation to remain true to the essential and great things in Mr. Taylor's teachings. We must always bear in mind that Mr. Taylor continually declared that details of mechanism which are the best at any particular moment are only steps to something better. To be true to the vital things in Mr. Taylor's philosophy is to be open-minded to the disclosures of experiment and investigation, and to the logic of discussion, and, when convinced, to acknowledge and act upon the conviction.

Mr. Frankfurter made a penetrating observation at the meeting of March, 1917, when he stated that to one on the outside, the Taylor movement appeared to represent even in its short years three distinct stages. There was a period of pioneer days when Mr. Taylor had to fight for recognition even from those in his own profession; the period of the great lonely fighting on the part of a leader with a small though devoted group of followers. Next was the period, usual in the history of great ideas, when the pioneer movement became a dogmatic faith, especially with respect to the infallibility of details. Finally there came the period of the larger conception of scientific management, in which it is realized that the philosophy must be made more complete, as Mr. Taylor would have made it, by taking into account factors revealed by other sciences and integrating them into a unified system. I believe we are truer to Mr. Taylor in this third period than when—and if—we were in the second.

The test of the permanent value of an idea or of a philosophy is the absence of the necessity for a continuing dogmatic faith. Many of the details which in contemporary minds supported Darwin's conception of evolution have been proved utterly false by the experiments of latter day biology; yet the Darwinian philosophy has not been shaken in its fundamentals and Darwin's position is only the more firmly established. He is still the father, preëminently, of the modern philosophy of evolution, and his name stands higher than ever in the history of the development of human thought.

A practical application of this consideration of the obligation of this group to Mr. Taylor's name and to his memory lies in the determination of the conditions of membership in the Society. Is it not possible that these conditions, as now presented in our constitution, were formulated when we were unconsciously in the second of Mr. Frankfurter's periods of growth? May

not modification be desirable, to represent more accurately the present and higher conception of our faith? Is it not better that we ask those who desire to join us, not whether they accept the details but whether they accept the principles; not whether they have found it expedient to apply the principles without modification, but whether they as a social service desire to spread the philosophy?

The opportunities of this Society, with respect to its obligations to industry and to the larger world of affairs, have without question been impressed upon all of us by our experiences and observations in the conduct of war and by the social problems which have been brought to light by the war. We have not yet had the opportunity to clarify our thoughts by comparisons of observations and experiences, and we have not yet data which are adequate to enable us to form conclusions regarding the larger social problems. We cannot distinguish the forces which are making for results that cannot be foreseen—we simply feel that we are carried along in a great current of changing conditions; we cannot comprehend the relations and influences of the forces which we do perceive; we are without perspective. Yet I cannot help but feel that conditions which are developing demand the greatest effort which the science and art of management can yield, and that there are opportunities which must be seized and obligations which must be met by this group. We must analyze tendencies and determine policies, without fear of the errors we are sure to make. If we hesitate the opportune moment will have passed.

In the time which remains at our disposal this evening I shall venture to touch upon four problems which it seems must be from now on subjects of serious consideration and which must have an influence on the establishment of our policy and on the nature and intensity of our activity.

The first of these is the growing interest in scientific management in other strong industrial nations. How many of us realize that in France, England and Japan there is at present an interest in scientific management comparable to that which existed in this country after the Eastern Rate Case hearings in 1911, and that there is sure to be an intense study and extended application of the principles in those countries? France and England particularly have had to exert every ounce of energy in the production of material for war, and will voluntarily apply every effort to restore depleted capital, readjust disorganized industry, and resume their former positions in manufacturing and in international trade. Japan, relatively inactive ally in the war, has been given a remarkable impetus and expansion in industrial development, and desiring to maintain that new momentum and having had freedom to exercise her perspicacity in looking ahead towards the struggle

necessary to maintain it, is already appraising the various managerial mechanisms for increasing productivity. In all these countries the Taylor philosophy of management is under scrutiny, and members of this Society have received inquiries which indicate an intent to study it exhaustively and to apply it. One year ago this month an order was issued by Clemenceau from the office of the Minister of War directing in considerable detail how the Taylor principles should be applied to the organization and administration of military plants, "to secure economy of labor and of mobilized personnel." It ends with this significant sentence: "(The present circular) should not be taken as the last word in the organization of work but as a beginning towards more and more efficacious and scientific methods."

This international interest is of significance to us. From the point of view of national prosperity and of international competition, we must not fail to keep in the lead in the understanding of and the utilization of what Clemenceau calls "more efficacious and scientific methods." We must redouble our energy in promoting the understanding of the principles in our own industry, in supervising their application and in training young men in increasing numbers to take our places. A great deal is being said these days about the opportunity for and necessity of expanding our foreign trade. That is an object to be accomplished only by sustained and serious effort. Whatever measures we pursue with respect to increased shipping, banking and credit facilities, one thing other remains fundamental: increased productivity at lower unit costs. As Mr. Vanderlip has put it: "The tap-root of this whole question of foreign trade . . . seems to me to run right down through the capacity of our workshops to manufacture and the efficiency of our labor to produce." In these facts surely is a challenge to an organization which stands for the increase of productivity through more scientific methods of management.

It is to our advantage to take the leadership in this international interest and to direct its development. If we do not, some group that we believe to be less worthy, will. From the point of view of science and of ethics it behooves us to do so. If internationally the philosophy of Mr. Taylor is misapplied by practitioners who are seeking personal reward regardless of methods and ultimate results, the obstacles to our own efforts in this country will be multiplied. In the spirit of scientists defending their science by preventing misunderstanding or misapplication of its principles, we must take measures to give this Society international influence.

The second of the current problems to which it is desirable to call attention as bearing upon our future policy and activity is the problem of the relations of management to labor. We were manifesting an in-

creasing realization of the importance of that problem before the war. As a result of the war it has become probably the most critical of our domestic problems, and not temporarily critical. Labor has contributed its share in winning the war; it could have lost it for us. It has exacted its price, and through its organizations is more powerful than ever. It is forming international alignments. Readjustments in wages and in prices will be delicate processes, and will present opportunities for friction. In controversies that will inevitably arise labor will present arguments based on conscientiously thought-out points of view. The British labor program, for instance, is a document requiring most serious and dispassionate consideration, and it will have international influence. The power of labor has been strengthened and ideals have developed as a result of the war. Collective bargaining is now a conservative demand. Coöperation in management is a developing ideal. What is the bearing of these changes on the principles of management? Surely here is not merely the opportunity but the necessity for scientific investigation and analysis. The investigation cannot be one-sided. That at least must be coöperative whether the management in which it results is coöperative or not. Labor misunderstands and is misapprehensive of scientific management. Too many managers have refused to attempt, in a spirit tolerant of other men's prejudices, to enlighten labor and have refused to become enlightened themselves. We are confronted with the anomaly of the existence of contented, prosperous and coöperative working forces in Taylor plants coincident with a great gulf of misunderstanding between the leaders of scientific management and the leaders of labor. Here is a problem which must be approached seriously and must be solved; and to that end this Society must adapt its policies, and the organization for giving them effect.

A third problem, or threatening problem, comes out of Russia. Not Bolshevism, which seems to be an excrescence, but that more fundamental thing, thoroughly rooted in Russian communal life, the Soviet organization. It is useless to attempt analysis of its present status or of its possible influence, for we do not have the necessary information. But we know that it comprehends state control of industry and management of plants. It is being tried and information has come from reputable sources in a position to receive more than usually accurate and complete information that there are cases of plants under coöperative management in which the productivity has been greatly increased over that under former private management. Whether these particular instances are correctly reported, and if correctly reported, whether they are typical, we do not know. We are inclined to believe that the experiment is bound to fail, if for no other reason, because confronted by innumerable