

ship as laid down by Mr. Taylor has been due to a lingering prejudice against the name "Taylor" and to a reaction of scepticism connected in the linking of the terms "scientific" and "management."

Undoubtedly also our message has not been more fully absorbed because, as Taylor himself has pointed out, the easy way is usually more attractive to the average manager. Short-cuts are particularly tempting. It is due also to the fact that we have been talking calculus much of the time when the manager is still struggling with elementary algebra.

Primarily, however, I believe it is a case of psychology. Mr. Taylor himself was not noted for his tact and appreciation of the psychological elements in human affairs, and I am afraid that we have tended to forget certain principles of mass as well as of individual psychology. I am afraid that we have too often given the impression to the manager that nothing which he has or does is worth much, that we have asked him as well as his workmen to "lose face" by expecting that he "back up" on matters which he cannot do without losing status, as well as by failing to give credit for good work and good suggestions where credit is due.

We must admit that some who are least sound in their principles and least scientific in their work have been better missionaries than we have. Impossible programs are proposed in the name of Scientific Management, and when these superficial substitutes are sold it adds to the doubt and distrust of intelligent management as regards the whole movement.

On the whole, however, as has been intimated before, I have found recently a very deep interest in really scientific methods of management and a much more open-minded and receptive attitude generally in any effort to really take advantage of what Mr. Taylor has given the world. For this we very largely have to thank the splendid constructive work of this Society under exceptionally able leadership. I am not preaching pessimism and discouragement therefore, but exactly the reverse, for I believe we are on the threshold of a development along lines which we believe will far surpass anything in the past. But the extent to which we can take pride in this growth and its permanency, and the extent to which we will be relieved of the present necessity of denying responsibility for attempted short-cuts, which have no part in our philosophy but which nevertheless reflect back upon us, will depend upon the extent to which we first formulate and then secure the acceptance of the

fundamental and underlying principles of this whole movement—the mutuality of interest of all parties, standardization as a basis of good management, the primary duty of the management to assume its full share of the work and responsibility; realizing that unless we ourselves emphasize these fundamentals we must not be surprised if others mistake the mechanisms for the essence. We are very directly the custodians of an industrial philosophy which is distinctly a "quality product"; upon us devolves the obligation of keeping faith with and proclaiming the ideals of its founder. Is it not possible for us to get our message across so that administration can distinguish the sound from the superficial?

IV. Obligations and Future Problems

Some of the outstanding problems which must occupy our attention in the future will be outlined very briefly.

A. Production

One of the biggest problems ahead I believe is that of securing suitable foremen. Under the rapidly increasing complexity of modern business, in spite of the unquestioned advantages in attempting to meet problems of organization through instructional foremanship, there is going to be increasing difficulty in securing and training the right type of foreman. Not only the mechanical and managerial duties of securing maximum production at minimum cost, but also the increasing realization of the importance of the foreman from the industrial relations standpoint, is constantly emphasizing the necessity of training high grade men for these key positions.

I believe that with restriction of immigration the question of the better utilization of such unskilled labor as we can secure, and particularly the devising of labor-saving equipment and methods to make up for an inadequate supply of common labor, deserves intensive study.

I feel that the question of fatigue must be given additional attention for the proper determination of rest and delay allowances. There is needed here the combined efforts of the production man, the industrial physician and the practical psychologist.

As regards mechanisms, the period of competition which we are entering will force the development of effective and more expeditious means of control, and new mechanisms of real value will undoubtedly continue to be devised. Simply to mention one such apparatus, we find need today of more adequate methods

of determining the order of work and thereby securing a better machine and departmental balance, in plants doing a miscellaneous jobbing or made-to-order business. Closely related to this is the need of further intensive study of lot sizes.

B. Distribution

The importance of cutting down as far as possible the extremely high expenses of selling must not fail to receive more intensive study than is generally given it today. There are to be sure a few pioneer firms which are making real headway, but any one firm or group of firms can have but limited effect except by way of example on this truly national problem.

In a report of the Joint Committee on the Agricultural Industry,³⁷ it is shown that of each \$1.00 spent for many articles in the United States in 1921, less than \$.50 in many cases represents the cost of the finished product ready to sell. The conclusion of the Commission is that we have outgrown our whole distribution system. The insistence of immediate service in every case where it is at all practicable has made manufacturing to order practically a thing of the past. The problem confronts us as to the means by which the increasing cost of production and warehousing pending the customer's demand is to be met, and to what extent field assembly plants can relieve the situation.

C. Finance and General Administration

A further standardization and simplification of materials, and of varieties and finish of product, needs the detailed attention of factory executives.

Questions of seasonal industry, continuity of employment, unemployment insurance, service bonus and pension systems, and the general coralling of the business cycle, must continue to be studied in a scientific manner.

Industrial relations problems must continue to be investigated in a sympathetic manner. Since these problems probably cannot be permanently solved, it is therefore incumbent upon us to devise more adequate means for adjusting differences currently as they occur.

Our relations with organized labor, which has shown a very much more open-minded attitude toward the Scientific Management movement during the last few years, must be fostered. I believe one of our great

duties is to minimize those seemingly irreconcilable points of differences which may remain, and to cooperate in the solution of common problems. We have an excellent opportunity to help in persuading organized labor that it is its duty to allow and persuade the individual to produce up to his individual ability. In order to secure that organized labor must have confidence in our motives as respects both the group and the individual.

The following striking excerpts from the Resolutions of the American Federation of Labor have the ring of sincerity:³⁸

"Industry must organize to govern itself . . . It must bring order to itself constructively or it will have an order thrust upon it . . ."

"It is not the mission of industrial groups to clash and struggle against each other.

"Facts must take the place of opinion and selfish interest.

"Labor stands ready for participation in this tremendous development."

Are we willing to help them?

We as a Society have not, I feel, utilized as we might the many educational institutions which are giving courses on management. I believe that in a few years the profession of management will be generally recognized, and that our future managers will be expected to have had training in this, as in other professions. It is our obligation to see that the part which the schools of business play in this training is based on thorough understanding of what really constitutes sound management.

A prime educational duty before us is to foster the increasing readiness on the part of the banker to look beyond the balance sheet. It is only through a wider dissemination of truly scientific and broadminded methods of industrial management that we may hope to secure united action in bringing about more enlightened administration of national and international affairs.

Related to this subject is that of the measurement of management. We have yet barely scratched the surface in this respect, and although the measurement of the *art* part of the management can never be exact, yet that part which is scientific has not yet had applied to it satisfactory yardsticks. In this connection the general question of executive reports needs further study.

³⁷Reviewed in *Scientific American*, December, 1923.

³⁸*American Federationist*, November, 1923.