

ing is being broken down by the efforts of standardization advocates who are pointing out common problems and common solutions. In France there is advocacy of installations through corporate groups and unions which would do much to break down the desire for secrecy.

We hear much, as an obstacle to advancement, of the lack of technical societies in scientific management. This is to be noted in Mr. Sheldon's excellent paper for the Taylor Society.³ It is also to be noted in the letters of our French correspondents and in correspondence from Belgium. Another obstacle is the belief that scientific management applies only to repetitive work. This is advanced especially in Belgium, where, because of the nature of the country and of its demands, there is a great diversity of product and many plants turn out only small quantities of any one article. Another obstacle encountered is the opposition of government officials who do not understand and who must be conciliated and informed. There is also in several countries a need to educate and conciliate even the university people, as well as both employers and employees. It would not be wise to mention the name of one country where all of these classes must be conciliated and where in spite of this the brave advocates of scientific management are making distinct progress and look for more progress in the immediate future. The effect of the war and the depression in business are noted in many countries, but seem to be felt especially, perhaps, in Canada, where also there is complaint of lax management because of too plentiful labor supply. In spite of all this, there are, in several countries, government bureaus that are investigating scientific management, or such bureaus are planned for.

In Canada the Honorary Advisory Council for Scientific and Industrial Research recommends that general investigations be superseded by specific investigations. To quote: "It is felt that at this stage the best way for the committee to gain the confidence of industry would be to *conduct some specific piece of research* from which *definite* conclusions could be drawn on some *concrete* problem, however small."⁴ This could furnish a text for American management societies! In Germany there is the feeling that there has not been enough stress laid on the *science of man-*

agement, and this obstacle they are strenuously trying to overcome. In France there are as yet few or no experts in scientific management working in a consulting capacity, and they seem to feel that they progress very satisfactorily without such experts. England is profiting, she feels, by such experts as have practiced there. So is Germany.

From France comes a very strenuous indictment of American literature. It is felt that there is much confusion in the form of Taylor's books; that in all the literature there is a poverty of example, which Taylor's books illustrate; and that the enormous results there cited suggest "American bluff." There is comment on lack of tact in Taylor's presentation, on certain phrases that offend the worker, on the undesirability of the selection of the strongest and ablest, and on the fact that the increase of the task offends the worker's principles. The belief is elaborated that a complete installation demands too much time, much money and intensive laboratory investigations, too many specialists and too great an effort to secure cooperation. These criticisms all indicate need for supplementing the present presentation of the Taylor system, if it is to make headway. Copley's life of Taylor⁵ will do much to explain his work and his books. A life of that great pioneer, philosopher and manager, James M. Dodge, and widespread literal translation of his practice and writings would add invaluable information as to the "human side." The increased interest in developments since Taylor's day demands that progress in the science of management be outlined and evaluated by trained writers like Drury, who really devote themselves whole heartedly and in a non-partisan and constructive spirit to finding and presenting the facts. Such work demands background, intensive training, capacity, fair-mindedness and both writing and teaching ability. A hard standard to reach!

Many foreigners, notably those in Denmark, remark on the conservatism of their workers and their employers and the need for making advance slowly. This calls for advice on methods of presentation and on sequence of installation, planned to effect necessary changes without any jolt to existing organization, by carefully thought out stages, each adjustment to be satisfactory to all concerned.

From England we hear not only of British conservatism, but of the pride of the British in this con-

⁵Frank Barkley Copley, "Frederick W. Taylor, Father of Scientific Management," Harper & Brothers, 1923.

servatism, of objections to accepting anything "that has not been fully proven," of objections to a new vocabulary and a desire to keep old terms and functions unchanged. The foreman has always been accepted as the accredited representative of management, with whom the worker feels his contract is made; and in adopting scientific management there, the foreman is made the channel through which all functions must pass. With such adapting comes at times an entire misunderstanding of the uses and value of time study and much overemphasis of cost accounting. This indicates a distinct call for this country to make plain the principles and practices that it advocates; the need for extreme care in changing any part of the mechanism without considering its relation to the whole; the place and value of time study, motion study, and other methods of measurements; the relation of costs to the other parts of scientific management and the place of the cost accountant in management work.

In some countries we find evidences of pirating American books, articles, ideas, methods and mechanisms. Even when due credit is given these are too often adapted to suit some imaginary need and, thus adapted, are entirely unusable as part of a complete installation. This is not important as affecting those involved on this side who are too busy to be much disturbed and too sure of the necessity of scientific management as a world force to wish to retard its growth through any avenue. It is most important as showing the need of clearer presentation here and of greater publicity as to sources of information and available material.

One of our own countrymen seems to believe that the Taylor system overemphasizes the mechanical aspects of work and is "lopsided" because it lacks the technique of human behavior. He finds this viewpoint strongly backed by opinions in Germany; and believes that their great development there in psychotechnic is largely an endeavor to supplement this lack in the Taylor system as they understand it and as they believe we are installing it.

We find, in a Canadian interpretation, a confusion of scientifically studied operations with scientific management, an idea that such management applies only to manufacturing, and a confusion of the teaching of the principles of commercial business, with teaching of scientific management—and these confusions are by no means confined to Canada!

You may doubt the validity of these objections or

obstacles as representing any large body of thought or any group of thinkers. If you do, you have only to go over the foreign literature, as it appears in any periodical or—as reprinted and revised in this country, to find every statement made here substantiated. Ideas are certainly misinterpreted and misapplied unintentionally, but the fact remains that the most luxurious of foreign growth does require much pruning.

To summarize, it cannot be overemphasized that the underlying causes of these obstacles to advancement abroad or of objections to such advancement lie in faulty practice, teaching or presentation in this country. We must elucidate our belief and our practices so that they cannot be misunderstood, and carefully review European and Asiatic beliefs and practices, in order that these may be corrected and careful recommendations given. In other words, a clearing house is needed.

Methods Advocated and Found Profitable

We turn now to causes of advancement abroad, and summarize first advances in education along lines of scientific management. These are most astounding. In France there is an endowment of one hundred thousand francs a year given by one of the prominent manufacturers, which enables technical students to visit highly organized plants. There is also the start of an organization which meets every month to discuss problems of management which, while it has as yet only a few members, will doubtless grow steadily. In Denmark efforts are being made to introduce efficiency as a subject in the polytechnic schools. In Iceland, the professor of psychology at the University of Reykjavik is the foremost advocate and exponent of scientific management in the country. He has visited America, is doing installation work, and is interesting his students and the entire community in the subject. In Italy there is an institution for special instruction which makes physical and mental tests, provides vocational tests and assists in placement. There, as in many other countries abroad, a start towards education in scientific management is being made through advances in applied psychology and through correlating applied psychology with management. The conferences held at Barcelona in 1921 and at Milan in 1922, while discussing primarily vocational guidance, showed enormous interest in scientific management and invited papers in that field which were presented, enthusiastically discussed, and

³"The Art of Management from a British Point of View," *Bulletin of the Taylor Society*, Vol. VIII, No. 6, December, 1923.

⁴The italics are ours.