

Scientific Management in Other Countries Than the United States¹

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ADVANCES in scientific management in other countries than the United States have a deep significance to this country, especially to management engineers. They have an historical significance, not only in the amount and rate of advancement, but as comparable to similar advances in this country during the same length of time. They have a geographical significance, not only as they refer to likenesses or differences in geographical conditions in the different countries, but as they refer to nearness or remoteness from the United States. They have a statistical interest, in that we shall in time be able to compare results and trace causes. They have an important economic significance, in their relation to the prosperity of the various countries involved. They have a sociological significance, as referred to the other factors that make up the status of the people of the various lands. The psychological significance can scarcely be overestimated, for a close study of the advances and the retardations furnishes information as to behavior that will furnish studies for generations of psychologists. But for the Taylor Society, nothing in this advance can be so important as its educational aspect.

This Society, as advocating and as sponsoring scientific management, is obligated to all the nations of the world. It must learn from a study of the advances in other countries two things—first, possible improvements that it can make in its own practice, and second, possible assistance in the development of scientific management it can offer these other countries, whether this consists of removing obstacles to its advance, of furthering activities already prospering, or of cooperating in finding new units, methods and devices of measurement that can be used. It is the aim of this paper to present conditions abroad with these thoughts in mind; to make clear the duties of this Society during the decade to follow if the Society is to be a true exponent of its

stated beliefs and is to assist this country in maintaining its leadership in the field of scientific management which is at present deserved and universally acknowledged.

Data on which this Paper is Based

This paper is based on a mass of foreign literature in our files; observations made during conferences with visitors from abroad; correspondence extending over the past fourteen years, and in some cases longer, with correspondents in many countries; and data collected during more than a dozen trips abroad which consisted largely of conferences with those interested in scientific management and of installation work since 1900 in the plants of foreign clients. We desire to acknowledge cooperation from all our past and present clients and from those whom we have interviewed or with whom we have corresponded, especially our pupils in management abroad, many of whom were at the same time our teachers.

Every statement made in this paper is based upon carefully selected and verified information, which is at hand and can be examined by anyone at any time if the authorization of the one furnishing it can be secured. We should have been glad to mention the names of all those who have given us information, as well as of plants where advances in management have been made, but many have requested that this be not done. Because of the necessity of a brief presentation, an enormous amount of information valuable in itself and as an indication of the amount of interest in the subject, has had to be omitted; but we feel that not only our appreciation but that of the Taylor Society goes to all those who have cared enough to further the cause of scientific management to make this information available.

A first glance over the data collected brings before one a host of interesting personalities, for those who are advancing the cause of scientific management in other lands are not only splendid types of the nation they represent but fine specimens of human beings.

Many are approaching the problem of scientific management with the missionary spirit of service, and with the belief that maximum waste elimination is for the interest of all. We quote a Danish professor who writes "Having now attained the age of 70, I am going to give up my chair in the University, but I hope to get sufficient strength to work for scientific management—as far as I can see, one of the most important social problems at present." And there is a professor of engineering in England who is doing the same splendid thing. It may surprise you to know that in the past the largest group interested in scientific management abroad has consisted of professors of psychology, physiology and psycho-technic. There are also engineers, economists, statisticians and men whom we might class as educators, although whatever their fields of activity, educated men abroad are almost always also technical men. There are an enormous number of scientists, especially research men, and of writers interested in scientific subjects. There are comparatively few manufacturers, although there are some exceptions. We have a list of "brilliant examples" of satisfactory installations in many countries—some made by American consulting engineers, some by local consulting engineers, some by engineers attached to the plant. Each represents one or more interested manufacturers. This list, unfortunately, is not available for publication. There are some few labor leaders interested, fewer workers and still fewer government officials. Those who are doing the most writing abroad are, or have been, teachers in universities or technical schools. Perhaps this is only natural, as while scientific management spread in this country from the plant and actual practice, there it is spreading from the colleges and other educational institutions.

You are doubtless all acquainted with many of the types of persons who are furthering the cause of scientific management abroad: A Japanese psychologist who has read much, written in many languages, and corresponded with many leaders; who comes to this country to get in touch with latest findings and carry them back to develop in the educational institutions and in the industries of his country. An Icelandic psychologist who comes to study refinements of measurement and to apply the most intensive scientific investigations of the One Best Way to Do Work to the industries of his country. A young Dutch engineer who brings knowledge of the advanced standardization methods of Holland and comes to

get actual experience in American industries, and to compare methods with theirs. A young English university man who, paralyzed from an accident while swimming, turns to research not only as a relaxation but as a panacea, and does much to awaken his countrymen to interest in scientific management before his short life is ended.² A distinguished French scientist, a master of his own branch and a leader among his countrymen, who comes to cooperate with our leaders in thought and to develop an international method of attack. A brilliant young German with the ability to think equally well in several languages and many subjects, capable of comparing methods and results and indicating trends. A Spanish psychologist who thinks in terms of vocational guidance for all youths of his country, and assists in getting together groups of men from all nations interested in such subjects and spreading their findings before the world. A young Canadian Government official with a passion for better methods, and not only a thirst for information but a desire to apply everything he learns in order to get a personal reaction. Army and navy men—Swedish, Belgian, French, Japanese, etc.—it is such types as these who are stimulating interest abroad, and all of these mentioned and many others are of the type who desire to cooperate, who wish to make scientific management not a secret of the few, not something belonging to the informed and lettered, but a working practice for the entire industrial world, that lower unit costs of work and higher wages simultaneously may go far to solve the problems of lower costs of living everywhere.

Sources of Scientific Management Information Available to Other Countries

We have mentioned visitors to this country, and the number of such visitors is increasing, as is also the diversity of types. Even in the early days of scientific management it was customary for young men to come from abroad and enter the industrial plants of this country as learners, apprentices or workers, just as similar young men came and took courses in the colleges and universities. The number of these is increasing. Practically every day brings news of such young men coming to this country, and almost every steamer has one or more of these among its passengers. The number of such young men more or less adequately trained who return and are

¹A paper presented at a meeting of the Taylor Society, New York, January 26, 1924.

²See *Science*, August, 1922, and *The Spectator*, July 15, 1922.