

The IRI from the very beginning of its existence some three or four years ago has always emphasized this point and got a whole-hearted cooperation from American members, especially in the Council meeting of this year held at the Rigi, where we were privileged to have Mrs. Gilbreth with us. I may, perhaps, quote one or two sentences from reports connected with this organization. First, from the introduction to the report of the 1925 Congress: "Men remain the pivot around which industry must always evolve." Some of the resolutions passed at this last Rigi Council meeting of 1926 follow: First, scientific management is only really scientific insofar as it takes every industrial factor into consideration, with emphasis on the human factor; second, it is an essential duty of industry to eliminate all unnecessary fatigue; third, industrial welfare or personnel work should always go hand in hand with factory legislation, the establishment and maintaining of good working conditions being a first charge on industry.

The main work of the IRI for some time to come will be, I imagine, the study of the human element and all its relations in industry. This, of course, will bring us into contact with many managerial and other problems as we shall have to watch for any attempt to dwarf the human element in applying some of the new methods. I suppose we shall have to carry on this work until the day when everyone in industry fully recognizes the necessity of paying full attention to the human element.

Personally I should like to say that I consider any industry a failure where those employed in it do not have full scope for their development, physically, emotionally and mentally, and I think the belief that industry could exist only for industry's sake is one of the superstitions of our present day.

### An International Science of Management A British View

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THE value of international cooperation in the development of a science of management may, I think, be demonstrated from several different standpoints; but there are two in particular to which I wish to confine my remarks tonight. The first is derived from a study of recent industrial

experience in Great Britain, whilst the second relates to the bearing on the present problem of some general principles of scientific method.

Mr. Butler has already, in his excellent address, drawn attention to the existence of certain significant differences between the industrial conditions of Europe and those of America, and has indicated some of the conclusions to be drawn from a consideration of these facts. In view, however, of its great importance, I should like to dwell a little further on this theme. It is, I believe, a matter of common knowledge that the relatively few experiments in scientific management which have been attempted in England have met with a somewhat discouraging reception. The prevailing attitude on the part of labor has been one of suspicion and distrust and even, in some cases, of open and pronounced hostility. This unfortunate result has led to a corresponding reaction on the part of the employers concerned: disappointment born of their misguided venture, and unwillingness to risk further industrial friction in an unprofitable cause.

In seeking to account for this situation, one turns naturally to a record of the actual circumstances in which the experiments mentioned took place. Here, it must be admitted, lies at least one cause of their lack of success. Imperfect and superficial knowledge, on the part of employers, of the principles and practice of scientific management; undue stress on the mechanical side of the question and neglect of the human element involved; a lack of open-handed dealing and a consequent failure to win the confidence and cooperation of the men: these factors have all played their part in fostering a misunderstanding of, and an active opposition to the application of so-called "American methods" to British industry.

It seems to me, however, that the ultimate explanation of this attitude is to be sought in a wider region of facts; namely, in the historical, social and economic background of the British labor movement, and in the more or less characteristic outlook and habits of mind which those backgrounds have largely conditioned. That this is true is evidenced by the nature of the reasons usually given by workers in objecting to the introduction of scientific management. There is, firstly, a general distrust of the aims and motives of employers, based on past experience and on ignorance of the new system and its methods. Secondly,

there is a fear that the adoption of the system will result in "speeding up" and overstrain; thirdly, that it will lead to overproduction, wage cutting, and eventually to unemployment; fourthly, that the hard-won right of collective bargaining will be imperilled; and lastly, that the worker will be deprived of the power and privilege of his long inheritance of craft knowledge.

That these fears are very real factors in the situation and that they are not entirely peculiar to the mental "makeup" of the British workman is shown by the history of the management movement in the United States.<sup>3</sup> But undoubtedly their comparative strength and influence differ considerably in the two countries, owing mainly to those differences in industrial background to which I have already referred. The growth of trade unionism in Great Britain in the past fifty years has been widespread and rapid, and has produced a series of highly organized groups whose general and specific characteristics are reflected in the reactions of their individual members. These organizations, founded on craft distinctions, exhibit the stability and the relative homogeneity of outlook that arise from the possession of common occupational interests, customs and traditions. On the other hand, they also tend to promote a narrowly conservative attitude, suspicious of new systems and changes in practice whose final outcome cannot be clearly foreseen.

It should not, however, be assumed that the existence of this attitude implies any necessary opposition to scientific methods as such. The experience of the National Institute of Industrial Psychology in England, during the last six years, proves conclusively that this is not the case, and that a scientific procedure based on an adequate knowledge and appreciation of the human aspects of the situation may win not only the consent of the workers and trade unions but their whole-hearted approval and cooperation. I believe that likewise, with the proper exercise of tact and caution, and with a due allowance made for various differences in racial, social and economic psychology, the principles of scientific management, which have proved so successful in this country, can be, and will be adapted to the needs of British indus-

<sup>3</sup>Cf. R. F. Hoxie's "Scientific Management and Labor," the report of the 1915 investigation of the United States Commission on Industrial Relations.

try. Moreover—and this is the point which I am anxious to stress—the fruits of this enterprise should not be merely local or national. If the experiment enables us in any way to separate the essential from the non-essential, as Mr. Butler has put it, and thereby to improve its technique and principles, it will perform a genuine service to the science of management itself.

This conclusion may be reinforced from another and more general standpoint, that of methodology. Scientific management, as the name connotes, is essentially an attempt to place industrial organization on a scientific basis; to substitute for the haphazard methods of traditional practice an orderly and systematic procedure founded upon a thorough and unbiased study of the facts. Now there are two implications of this method which are of special interest in the present connection. These are, firstly, that the facts on which our principles are to be based should be drawn from as wide and varied a field as possible, in order that negative instances as well as positive may be observed and that all relevant factors may be recognized and appraised; and secondly, that in the compiling and collecting of evidence the time and labor of those engaged should be so coordinated and conserved that maximum results may be obtained from their research.

The bearing of these considerations on the study of industrial problems will, I think, be readily appreciated without specific illustration. How then, we may ask, can international cooperation help us to realize these ideals of science in the field with which we are here concerned? In speaking on a similar topic, a few years ago, Mr. D. R. Wilson, Secretary of the Industrial Fatigue Research Board in England, offered an interesting and valuable answer to this question. He suggested that industrial research should be placed virtually on an international basis by pooling resources throughout the world, and that for this purpose the International Labor office at Geneva would provide an admirable coordinating authority. You have already learned tonight that, through the bounty of Mr. Filene and the generous cooperation of Mr. Dennison and his colleagues, his suggestion is soon to become an established fact. Meanwhile there are, I think, several practical ways in which individual nations can make an immediate contribution to the work of the Geneva