

no amount of eleventh hour effort on his part could save them. Sooner or later they failed and the workers, often after years of service, found themselves cast on short notice into the streets to obtain other employment of whatever kind, and on whatever terms, they could. Such establishments are not good places in which to work. They are an unwarranted tax upon society also, and society should spare no effort to banish them from industry. Labor, therefore, on account of its high stake in the quality of management, is entitled to, and through its accredited organizations should, exercise a *critical* function in relation to management. The wise exercise by labor of such a function, I am convinced, can become a highly constructive force in our industrial and social life.

This new function, to be effective, however, should be well organized and should have as its important foundation scientific knowledge of just what constitutes good management. Standards of management based on such knowledge can then become available for use by labor in appraising the quality of management in particular establishments. Recorded knowledge of this character now exists, fortunately, in the shape of certain recognized principles of management that have evolved during recent decades and which, taken collectively, comprise the new science of management in its present state of evolution. Some of these principles may be enumerated briefly as follows: effective plant layout; standardization of efficient tools and equipment; orderly despatching of materials through the various stages of production; avoidance of every sort of unnecessary delay, or other waste, in plant activity; equitable setting of piece work rates; careful recording of costs; visible charting of important facts bearing on production, etc., etc. This technique, as intimated, is now on record for suitable adaptation to labor's use.

I wish now, without further delay, to propose tentatively, for the consideration of trade union officers and of the unions, an organization feature through which organized labor, I believe, can exercise a new critical function of co-operation for effective management. I propose that each international or national union maintain at its headquarters a department specially devoted to this function. Such a department might be called the "Industrial Research Department" or "Management Research Department." It would supplement

and serve the present standard machinery for collective bargaining and the handling of grievances. Its activities would consist, in a general way, first of compiling for the union facts in regard to efficient management practice for the industry; and second, of compiling information relative to the quality of management prevailing in the individual establishments coming within the union's jurisdiction. I propose, also, that the American Federation of Labor maintain at its headquarters a similar department functioning for the Federation as a whole. These departments can be supported by a small additional levy on the union membership, a definite percentage—say 90 per cent—of the total amount going into the treasury of each international or national, and 10 per cent going to Federation headquarters. Development of the proposed function must, of course, be a gradual process. It should be well considered by the unions and should proceed only under the most competent guidance obtainable.

Perhaps I should emphasize at this point that the proposal does not imply a dual control of industry by management and labor. Final responsibility, and the right to ultimate decision must, as now, rest with management. Labor's function, as set forth, is purely critical and co-operative. I should stress, also, the fact that I am not proposing anything that is dogmatic or rigid. Long ago I discarded all faith in "systems"—anyone's "system"—and I believe now only in certain principles of organization developed in every instance to meet the exigencies of an existing situation.

There is no scarcity of problems that demand from labor's standpoint the sustained attention of a department similar to the one just recommended. In the limited time at my disposal, I can only indicate a few, typical ones, and offer some tentative ideas as to a possible direction of their solution. In a general way, the proposed function is designed to provide a starting point or nucleus about which may be developed a scientific "labor" approach to management problems. For some decades now, industrial management has been in process of elevation to the scientific and technological planes. There is only one conceivable basis, therefore, upon which organized labor can meet management with adequate effectiveness today, and that basis is scientific. Briefly, organized labor, in order to accumulate power in the industrial world as it now

exists, must be equipped with the knowledge and the methods of scientific management.

One problem that calls urgently for the attention of trade unions in their proposed role of industrial critic is that of insistence on adequate cost-finding methods throughout organized industries. A surprising number of concerns, particularly in the ranks of small and medium sized establishments, still are floundering along without any form of cost system. Under such mismanagement the payroll is the only readily visible element of cost, and it looms up like a mountain. Machines may be standing idle during considerable portions of the day for causes not apparent; unnecessary supervisory and clerical functions doubtless are being maintained; unprofitable products are passing through production without anything to reveal the fact that they should be discarded in favor of profitable lines; necessary materials and supplies are almost certain to be unsystematically purchased, stored and moved to their points of use; steam and electric power probably are produced or purchased extravagantly and utilized wastefully. All manner of waste may exist in the absence of a cost system that would drag the evidence of it into uncompromising light. It has been a common practice of traditional management to saddle the cost of its own ineptitude in this respect upon wage earners in the shape of a reduction in wages. Apart from the inequity of this procedure, also, is the fact that the career of any such establishment is bound to be precarious and the tenure of employment for its workers imperilled. The unions, I think, should demand that each plant within their jurisdiction record its costs in a suitable manner.

A second problem is that of developing a time study procedure that will be acceptable to the unions. The attitude of organized labor toward time study is so commonly misunderstood that I wish to clarify it before this meeting. Organized labor, so my friends in the movement have often informed me, is opposed to anything that degrades the character of work from the worker's standpoint. Pioneering scientific management proceeded on the theory that there was nothing fundamentally unsound in the practice of observing a worker with a stop watch; recording his movements and their corresponding time values with great minuteness; subjecting these recorded movements and times to a later scrutiny; discarding those movements which,

in the judgment of the time analyst, were unnecessary; correcting movements which were adjudged as wrongly executed; resynthesizing the operation on this basis into an ideal or standard method; assembling the new component movements and times on an instruction sheet, and sending the latter into the shop as a standard method for future performance of that job. If forty men were performing the operation, quite regardless of their individual differences in temperament and physical organization, that, presumably, was the method each must carefully learn; that was the standard each must observe, and for such observance each worker was to receive as his reward, a bonus over his regular earnings. Labor leaders who have devoted thought to this subject maintain that such procedure is unsound. "You are degrading the worker's function to a somewhat lower level than that of the machine," they declare. "What interest can any man have in work when all opportunity for intelligent initiative and freedom of action on his part are taken away? Furthermore, the control of this entire process—the elaboration of the job, and the computation of the wage incentive—rests entirely with management. What guarantee has labor that it will be fairly dealt with? What protection is afforded against the unscrupulous manager or the irresponsible time study man?" This is an unadorned representation of labor's attitude toward time study as it has been given to me during many conferences with union officials. Anyone who brings an open mind to its review will admit, I think, that it contains elements of truth and justice.

If this exhausted the issue of time study, the conclusion would be simple. Clearly, it would be, "Abandon time study! Throw it overboard! We will get along somehow without it." But the matter is not thus exhausted. Like most issues, this one has its other side. Work proceeds through time. It is just as impossible to dodge a consideration of time in any scientific study of work as it is to ignore work's other factors of space and energy, or for that matter, work itself. Time study implies the principle of measuring work in relation to one of its major dimensions. Reasonably used, then, it cannot fail to be of great value to industry and to society. No single formula for its use has any special sanctity. If a particular method of conducting time study is found to vio-