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Organized Labor and Efficiency.

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The assertion that American prosperity is due to our great natural resources is only partly true. The fertile fields of the West would have brought us little wealth, but for mechanical science, and the development of agricultural machinery which eliminates waste in human labor.

In New England, particularly, our necessities and not our resources were the real cause of our prosperity. A poor soil drove us to manufacturing. High wages necessitated the saving of human labor and became the mother of our inventions, giving us labor saving machinery. That the people of the East have not attained even greater general well-being is due, in large part, to the fact that the supply of foreign low-priced workingmen made it possible to meet the demand for higher wages by means other than the elimination of labor waste. Human nature, like the inanimate, seeks the path of least resistance. To think hard and persistently is painful. The path of the pioneer is beset with obstacles. It was easier to tap the inexhaustible foreign labor supply than to devise and to introduce better methods and better management. Instead of keeping down the labor cost by eliminating unnecessary human effort and increasing the production of the individual, we met the workingman's demand for higher wages by the increased supply of workers. Instead of conserving the workingmen, we accepted the ready substitutes for those incapacitated by disease or accident resulting from excessive toll or improper conditions of employment.

Fortunately a new necessity has intervened: the awakened social sense of the community, with its longing for a truer democracy. This great ethical movement for real brotherhood of man reinforces the demand of the workingman for wages, hours, and conditions which will permit his living according to those higher standards essential to life, health, and the performance in a democracy of the duties of citizenship. These new and increasing demands have created a new necessity for economy in production. And scientific management comes prepared to relieve that necessity by a revolution in industry comparable only to that effected in the transition from hand labor to machinery.

It is important that the scope and incidents of scientific management be not misunderstood.

So much has been said of increasing the efficiency of labor that the importance of increasing the efficiency of materials, of plant, of working capital, and of service has perhaps not been fully appreciated. And yet the economies and the profits arising from the scientific handling of those factors in business are probably in the aggregate at least as great as from the increased efficiency of labor itself.

Saving the waste in materials is attained in part through securing that article which is determined by scientific tests to be best adapted to the needs, and of producing the result at lowest cost even if purchased at a higher price. It is attained in part through proper methods of storage and accounting, thus avoiding actual waste of the material itself, or of dishonesty in its purchase or use. Saving in plant is attained not only by adopting the best, but by so equalizing, placing, and using the equipment through careful planning as to secure practically its full use all the time, thus reducing the capital invested upon which charges for depreciation, interest, or rental taxes and insurance must be earned.

Saving in working capital is attained not only by so controlling and linking the quantity of supplies necessarily carried, and so eliminating delays in the process of manufacture as to reduce materially the amount invested in raw material and supplies and in work in process.

Improving the service so as to secure certainty and prompt deliveries reduces expense and annoyances, and vastly increases the successes and profits of the sales department.

Scientific management seeks to do for industry systematically and comprehensively in conserving effort, materials, and capital, what heretofore has been done sporadically and partially. Its engineers refuse to recognize that there is any legitimate sphere in industry for ignorance or lack of skill. Ignorance and unskillfulness necessarily spell waste, — and waste is sinful, whether it be due to lack of training, of selection, of equipment, or of planning.

In discussing the efficiency of labor a construction altogether too narrow has been given by some to the term labor. The labor to be made more effective is that of the managers and high salaried officials quite as much as that of the wage-earners. Indeed, the increased efficiency of the wage-earner is not possible until the heavy demands which scientific management makes upon those controlling and directing the business, including superintendents and foremen, are fully met. Increased efficiency must begin with those higher up. This is of the essence of scientific management.

Some persons unfamiliar with the principles and application of scientific management have assumed that there is in it something hostile to labor, and particularly to organized labor. This is absolutely unfounded.

In the first place, they have assumed that the aim of scientific management is "speeding up"; that it seeks to make the men work harder, thus exhausting the working men. That shows complete misconception of scientific management. Conserving human effort, and the man, is a fundamental tenet of scientific management. Among other things, it demands careful training of the working man: the employer's investment involved in that training creates a special incentive to the employer to retain his employee and to conserve his powers.

When Fred. W. Taylor, with infinite patience and genius, discovered the laws by which a given quantity of pig iron might be loaded into a car or coal be shovelled by hand in a third or fourth of the time ordinarily taken, he was protecting his workmen, not exhausting them.

The larger production is not attained by "speeding-up." It comes largely from removing the obstacles which annoy and exhaust the workman — obstacles for which he is not, or should not be made, responsible. The management sees to it that the best possible way of doing the job is shown him; that is, the way which takes least time, which takes least effort, and which produces the best result. The management sees to it that his machine is always in perfect order. The management sees to it that he is always supplied with the necessary materials. The management sees to it that the work comes to him at proper times, with proper instructions, and in proper condition. Relieved of every unnecessary effort, of every unnecessary interruption and annoyance, the worker is enabled without greater strain to furnish much more in production. And under the exhilaration of achievement he develops his capacity.

Closely associated with the erroneous idea that scientific management means "speeding up" is the objection to scientific management because of the bonus system.

Those discussions assume that scientific management is the bonus system. The protest of labor against the bonus system is in part well founded, because the bonus is apt to do more harm than good when applied otherwise than as a part of the system of scientific management. The bonus system is a common incident under scientific management, but it must not be supposed that it is scientific management. There has been a great deal of scientific management without the application of the bonus system at all. But it is an integral part of scientific management that the workman should get a "square deal," that he should get a proper share of the profit which he aids in producing, that his achievement should secure an appropriate reward. And in practice it has been found that this can be done usually more fairly through the bonus

system than by any other available method of compensation. But by the bonus system must be understood something very different from the bonus system which has been applied in many establishments to produce "speeding up." It involves these essential conditions:

1. A scientific investigation in detail of each piece of work, and the determination of the best method and the shortest time in which the work can be done.
2. A teacher capable of teaching the best method and the shortest time.
3. Reward for both teacher and pupil when the latter is successful.

Has anybody ever heard of the bonus system operating unfavorably to labor where these conditions have existed?

Higher wages, to be provided by the bonus system or otherwise, constitute but one of the ways in which scientific management will advance the condition of the laborer. The working man needs, besides higher wages, among other things, shorter hours of work. What greater hope can there be for shorter hours than that afforded by scientific management, the purpose of which is to eliminate, in every way, waste of human labor! If the productivity of the individual man is increased, perhaps even doubled or trebled, there will come with it the possibility of largely reducing the hours of work.

We are agitating now for the eight-hour day already introduced in many industries and in the public service. We are far from attaining the ideal; but we should not forget that it is due to science in business, to the labor-saving machines which have already so largely increased the productivity of man, that we have been able to make some progress toward our ideal working day. A hundred or even fifty years ago the working day was from twelve to fifteen hours long in many industries in which it is now but eight or nine.

With higher wages and shorter hours, the greatest need of the working man is regularity of employment. Irregularity of employment creates hardships and demoralization of every kind. It is the most sinful waste.

The introduction of scientific management in business has, wherever applied, made regularity of employment its prime aim. It could not be otherwise; because irregularity is the most potent cause of waste, not only of labor, but of plant and of capital. The existence of irregularity of employment is one of the greatest reproaches to modern business. It proves that the management has not done its part; and the very essence of scientific management is to relieve the workingman from these conditions and hardships which arise from the failure of the management to do its duty.

Again, some persons have expressed their apprehension of scientific management, as if it were inconsistent with, or at least hostile to, unionism. This rests upon an entire misconception.

The essence of unionism is collective bargaining; that is, instead of the employer dealing individually with each employe, he deals with a large body through their representatives in respect to the rate of wages, and the hours and conditions of employment. Is there not just as broad a sphere for collective bargaining in shops where scientific management has been introduced as where it has not! Collective bargaining may fix the minimum wage, be it by the day or by the piece; collective bargaining may fix the bonus, if any: where it shall begin; its rate of increase; and how it shall be applied; may fix the hours of labor and all the other conditions of employment just as much as if the management were of the old rule-of-thumb, chaotic type. Surely it is not inconsistent with the principles of collective bargaining that one worker may earn more than another; for in most successful unions, like the cigarmakers and the boot and shoe workers, most of the operatives are on piece work and the earning of some workers are double or treble those of others doing like work in the same shop.

Again, some persons have objected to scientific management on the ground that it would throw workmen out of employment. This has not been the result and will rarely be.

Scientific management undertakes to secure greater production for the same or less effort; but that does not mean that less people will have work to do. If only the same amount were to be produced the same number of persons might well be employed to do it if they worked less hours or less hard. But a more satisfactory answer is found in the fact that the amount of products which can be consumed will depend practically upon the ability to buy.

If goods can be purchased cheaper, more can be bought for the same money. And more will be bought; at least if wages remain the same or increase. The problem is exactly the same which was presented when the cost of transportation was reduced by substituting railroads for the stage coach, and the cost of goods was lowered by substituting machinery for hand labor. Has anyone ever known the demand for labor to decrease when profits were large? The demand for labor grows because the demands of the people grow with the ability to supply them.

It has been suggested by some that scientific management will displace the inefficient. On the contrary, it helps the "inefficient" most.

Scientific management recognizes the right of those less expert in the work to advance to greater efficiency, and the importance to the employer of training his workmen to be competent. It therefore provides through the most practical teachers for careful training of men to work in the best manner and to develop habits of industry, instead of letting, the "devil take the hindmost" and exposing the less competent to the probability of discharge. It supplies instruction, and offers to the teachers special incentives if they succeed in bringing up the hindmost.

The social gains to the workingman through scientific management are greater even than the financial. He secures the development and rise in self-respect, the satisfaction with his work, which in almost every line of human activity accompany great accomplishment by the individual. Eagerness and interest take the place of indifference, both because the workman is called upon to do the highest work of which he is capable, and also because in doing this better work he secures appropriate and substantial recognition and reward. Under scientific management men are led, not driven. Instead of working unwillingly for their employer they work in co-operation with the management for themselves and their employer in what is a "square deal."

As stated above, scientific management offers the means of meeting our social demands. The great advance created by the introduction of machinery we permitted in large measure to be dissipated socially — instead of utilizing the opportunity fully to raise the standard of our civilization. Another great opportunity is offered us. Shall we seize it? And I think that means primarily will organized labor seize it?

If the fruits of scientific management are directed into the proper channels the workingman will get only a fair share, but a very large share of the additional profits arising from improved industry. In order that the workingman may get this large share of the benefits through higher wages, shorter hours, and better working conditions, the labor unions must participate in fixing those wages, hours, and conditions, and in determining the application to the various businesses of the principles of scientific management. Unless the workingman is so represented there must be danger that his interest will not be properly cared for; and he cannot be properly represented except through organized labor. This, then, is the supreme opportunity for organized labor.

Will you utilize it to the full? — The Survey.