

Scientific Management

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What I want to try to prove to you and make clear to you is that the principles of scientific management when properly applied, and when a sufficient amount of time has been given to make them really effective, must in all cases produce far larger and better results, both for the employer and the employees, than can possibly be obtained under even this very rare type of management which I have been outlining, namely, the management of "initiative and incentive," in which those on the management's side deliberately give a very large incentive to their workmen, and in return the workmen respond by working to the very best of their ability at all times in the interest of their employers.

I want to show you that scientific management is even far better than this rare type of management.

The first great advantage which scientific management has over the management of initiative and incentive is that under scientific management the initiative of the workmen—that is, their hard work, their good will, their ingenuity—is obtained practically with absolute regularity, while under even the best of the older type of management this initiative is only obtained spasmodically and somewhat irregularly. This obtaining, however, of the initiative of the workmen is the lesser of the two great causes which make scientific management better for both sides than the older type of management. By far the greater gain under scientific management comes from the new, the very great, and the extraordinary burdens and duties which are voluntarily assumed by those on the management's side.

These new burdens and new duties are so unusual and so great that they are to the men

used to managing under the old school almost inconceivable. These duties and burdens voluntarily assumed under scientific management, by those on the management's side, have been divided and classified into four different groups and these four types of new duties assumed by the management have (rightly or wrongly) been called the "principles of scientific management."

The first of these four groups of duties taken over by the management is the deliberate gathering in on the part of those on the management's side of all of the great mass of traditional knowledge, which in the past has been in the heads of the workmen, and in the physical skill and knack of the workman, which he has acquired through years of experience. The duty of gathering in of all this great mass of traditional knowledge and then recording it, tabulating it, and, in many cases, finally reducing it to laws, rules, and even to mathematical formulae, is voluntarily assumed by the scientific managers. And later, when these laws, rules, and formulae are applied to the everyday work of all the workmen of the establishment, through the intimate and hearty cooperation of those on the management's side, they invariably result, first, in producing a very much larger output per man, as well as an output of a better and higher quality; and, second, in enabling the company to pay much higher wages to their workmen; and, third, in giving to the company a larger profit. The first of these principles, then, may be called the development of a science to replace the old rule-of-thumb knowledge of the workmen; that is, the knowledge which the workmen had, and which was, in many cases, quite as exact as that which is finally obtained by the management, but which the workmen nevertheless in nine hundred and ninety-nine cases out of a thousand kept in their heads, and of which there was no permanent or complete record.

A very serious objection has been made to the use of the word "science" in this connection. I am much amused to find that this objection comes chiefly from the professors of this

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