

there is much more opportunity for the use of initiative, in fact, there is necessity for it in the devising of instructions.

I call your attention to what Mr. Wolf said when he went into the scientifically managed plant in Syracuse, the plant where Mr. Babcock has done such excellent work. He said that time studies there were made in co-operation with the workmen. There is no other kind of time study, none that can be made without his full co-operation. You cannot do it without him. He not only performs the work, but in ninety cases out of one hundred you adopt his ideas. With your training and observation you help to determine best methods. Eliminate the waste, that is all there is to the game. It is a means not only of securing co-operation; it is the only means yet devised for securing a measure of co-operation. So far as I can see in Mr. Wolf's proposition he is going just as far as possible to produce accurate instructions. This does not in any way interfere with the initiative of the man, and the only example which is left in the slightest doubt is an example of such a nature that I believe it is too intricate to pay for the trouble involved. That is my honest opinion about it.

Now take Mr. Wolf's theory in the abstract. The thing that I want to show you is not that Mr. Wolf is wrong, but that in trying to make a distinction he is wasting effort because the distinction does not really exist. If you take his own theory in the abstract that there is a certain field that should not be subject to instructions, then if you are going at it scientifically, you have to use scientific means to determine what that field is. There you are. That is the whole thing. That is just exactly what we are doing.

I want to get down to more specific answers to some things, especially to what Mr. Portenar said, not that I wholly disagree with him,—I agree with him a great deal more than Mr. Portenar can possibly realize. I agree with him partially because the written word, even Mr. Taylor's best written word, as well as that of everybody else, does not adequately express the spirit of the thing. I have a conviction, based somewhat on knowledge, that it does not in this case. The assumption has been, since so much publicity has been given to this matter recently in certain connections, that everything that has been written on the subject has been an explanation to the labor unionist. Nothing of the sort. He was left out of all consideration when Mr. Taylor wrote his book, i.e. out of all consideration from the point of view of explanation. There are other sides that oppose the idea of scientific management and oppose it more than the laboring man, more than he did at that time, more than he does now, although certain branches of organ-

ized labor oppose it through misconception,—and for political reasons also, if we tell the truth. The men from whom Mr. Taylor at all times met the greatest opposition, and the men who today are the greatest obstacle to scientific management are the capitalists and managers themselves. You must realize that Mr. Taylor wrote his book for the purpose of convincing them, including engineers who have not seen the light, that it *paid them dollars and cents* because they are capable of thinking only in dollars and cents. He did not think that fellows like you, Mr. Portenar, needed that kind of argument. You must realize that those of us who are going after things, because we have to,—because we have to if we properly perform our duties and responsibilities must take into consideration all the elements, and there never was a man who gave more consideration to all the elements than did Mr. Taylor. You have only to read the last statement in his book on "Principles" to see his entire sacrifice to the cause. You need only think of that wonderful expression of his, "I can no longer afford to work for money," to get the spirit of the thing—an idealism as high as that which inspired the greatest leaders of the Church in the Middle Ages.

That being true, let us get at the point of view which makes us see the thing right, in justice to the man who devoted his life to the work. What is the right point of view? Mr. Taylor has made us all think a little differently and a little harder in the right direction though many of our minds are still imbued with traditionalism. This is my suggestion. If you will get out of your minds the traditional idea or the traditional word "authority" and replace it with another word, "responsibility," your vision will change and you will begin to see this thing. This is a system of concrete responsibility. The responsibility extends itself into finding the true laws that govern every relationship in industry.

As Mr. Taylor so often explained, the responsibility is first to get accurate knowledge and then to act upon it. This involves the responsibility of co-operating with and teaching the other fellow to assume his share of responsibility, and that is the great thing back of scientific management, putting all men on the same plane. All are responsible for their share and that share is not measured by man made law but by the basic or generic law involved. This is of the true essence of democracy.

In conclusion I wish to say men do not devote their lives to machinery or materials as such. If you had thousands of bales of goods which fed themselves into hundreds of machines, there would not be a job for a manager. There would be no scientific management, but the minute you have twenty, thirty, forty or one hundred people to handle those materials and those machines, you have a management

problem. Management, consequently scientific management, concerns itself primarily with human beings. It took Mr. Taylor and those who assisted him some twenty years to find out the laws of cutting metals. It took an inspiration from heaven for my friend Mr. Barth to express their cumulated knowledge. (It will take another inspiration for me to understand them). But all of this was conceived on the basis of obtaining accurate knowledge and using it as a proposition of management. All this kind of thing is in the spirit of making a man use less of the sweat of his brow to produce more of the wealth of the world. It is all done to serve the man. Any time that you do not realize that scientific management deals with the improvements and the true laws governing all things, tools, materials and conditions which surround the man who works in order to make every stroke of his hand and every move of his finger count for more so as to bring him and all concerned greater rewards, then you have an entirely erroneous conception of Mr. Taylor and the Taylor system.

MR. EDWIN DEVINE:¹ My qualifications for discussing scientific management are precisely those of a colleague of mine in my early days in university extension. He was asked what he knew on a certain subject. He said he didn't know anything about it, that he had not even lectured about it. While I have one or two side lines, my principal occupation is that of a profession which the President of the United States is very fond of holding up to ridicule, because he himself once belonged to it, I suppose. He did it again last night before an audience in Washington. He described an address, a very able address given by a college professor, and some practical hard-headed business men—engineers they may have been—who heard it were very much astonished because it was a good address. One of them said to the other, "That man has brains." The other said, "Yes, he has." "Well," the first one said, "how do you account for the fact that for twenty years he has been hanging around a college?"

I came into this room in a spirit of great humility and teachableness. My friends Mr. and Mrs. Hall have for some time been trying to get me to a place where I would have to find out something about scientific management. To-night they succeeded. I shall remain in this state of great humility modified by appreciation as long as I am within the hearing of anybody in this room. The appreciation will remain; the humility will disappear, because as soon as I get hold of any students or other audience that happens, like myself a couple of hours ago, not to know anything about scientific management, I shall

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have a lot of things I can tell them. I shall not be humble any more.

It really is an extraordinary spiritual experience to hear scientific management discussed in the way in which it has been discussed in the speeches to which we have listened. Perhaps you all discuss scientific management in this way. This is the first meeting that I have attended. One hundred percent of all the discussion that I have heard about scientific management is of a very high degree indeed. There would be no excuse for pushing me out in this way, wholly without warning, wholly without preparation, wholly without any qualifications to discuss scientific management from the point of view of business, if I did not respond to the suggestion that your Chairman has made, that what you really want is my re-action, what you really want is possibly, if I can do it without offense and without betraying my ignorance in too crass a way, to raise a question or two, possibly a single question that arises in my mind.

I had not any doubt before Mr. Wolf finished his address that scientific management places ample emphasis upon the human factor. It is a humanizing influence in business. If I have ever had any doubts about that in the past, they have been resolved by the way in which you have received the remarks made by two or three of your speakers this evening. I think, however, that I shall go on from the point where the trade unionist¹ left his case. In accepting what Mr. Wolf said, as satisfying his objections and as indicating a complete change of heart,—(if that were necessary on your part,—) I think that what Mr. Portenar will do when he thinks it over will be to raise and press again the question, not whether scientific management is humanizing, but whether the human relation between employer and employee is quite compatible with a system of despotism. I have in mind that system of authority, that system of despotism, of authority modified by responsibility which does not yet have in it the element the trade unionist really wants to have in it and is justified in having in it.

There is another thing that goes beyond the humanizing element, i.e. the element of industrial democracy. Even when you have gone to the utmost extreme in developing the initiative of the individual workman, in giving him opportunity for the greatest scope of his creative impulse, you have not yet on a frank, square, man-to-man basis taken him into partnership in determining the questions which he thinks and justly thinks, from my point of view, he ought to have a voice in determining. That is the question that I would press.

I think it will take another afternoon and another evening for a full consideration of whether you have

¹[Mr. Portenar—Ed].