

rest of his friends, that he is on the road to a speedy recovery.

With respect to the relations between manager and employee, I have a feeling that there are certain things in the minds of some members of this Society that are somewhat contrary to my own convictions. My convictions are based upon what we are actually doing in our mills at Berlin and are also based upon my three or four years' experience immediately after graduating as an Engineer in 1896, when I was working at the paper trade in various mills in New York State and New England. It was this experience as a workman that enabled me to realize the employee's point of view, and I feel that having been a workman myself I am qualified to speak for him.

I am going to begin by referring to Mr. Green's paper at the October meeting and the discussion of that paper.<sup>1</sup> Mr. Green has certainly worked out a practical method for recording the beating of stock in a paper mill and I consider that he has done a fine piece of work. There are, however, certain things in his paper which make me feel that he is advocating an attitude towards the workman not in accordance with the best principles of management. There seems to be in his mind a desire to put too much emphasis upon the giving of *minute detailed instructions* to the men, which do not allow them sufficient latitude to use their own creative imagination. In order to bring the subject before you more concretely, I am going to read an extract from Mr. Green's paper and my discussion of it published on page eight of the October BULLETIN, as follows:

Mr. Green says:

"We on the management side have the means of directing in detail the treatment of every batch of stock in every beater, day and night, and of taking the full responsibility which belongs to us for the results."

upon which I commented as follows:

"Our efforts, ever since we began to realize the workman's point of view, have been not to take responsibility from him. It is our plan to increase his responsibility and we feel that it is our duty to teach him to exercise his reasoning power and intelligence to its fullest extent. There is *no advantage gained by stimulating a man's reasoning power, and through this means his creative faculty, if the management relieves the man of the responsibility for each individual operation.* The opportunity for self expression, which is synonymous with joy in work, is something that the workman is entitled to and we employers who feel that management is to become a true science must begin to think less of the science of mate-

<sup>1</sup>Bulletin of the Taylor Society, Vol. II, No. 3 October, 1916.

rial things and think more of the science of human relationships. Our industries must become *humanized*, otherwise there will be no relief from the present state of unrest in the industries of the world.

"In this connection it might be well to observe that our experience in the pulp industry has been that instructions which go *too much into detail* tend to deaden interest in the work. We realize fully the value of sufficient instructions to get uniform results, but we try to leave as much as possible to the judgment of the individual operator, making our instructions take more the form of constant *teaching of principles* involved in the operation than of definite *fixed rules* of procedure. It is necessary to produce a desire in the heart of the workman to do good work. No amount of coercion will enlist him thoroughly in the service."

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"The new efficiency is going to reckon a great deal more with the needs of the individual man; but in order to do this, it must have some philosophical conception of the reason for man's existence. *It is beginning to be understood that when we deny to vast numbers of individuals the opportunity to do creative work, we are violating a great universal law.*

"Man never creates matter or force, but he does create conditions for the expansion of these great primary universal forces and it was for this purpose that man, considered generically, was created. The degree of efficiency of an organization, therefore, can be measured by the extent to which it permits the individual men in its employ to do creative work, which as I said before gives joy to the worker because it *gives him an opportunity for self expression.*"

Professor Drury's paper, which appears in the November BULLETIN,<sup>1</sup> gives expression to the same thought in more concise language; and I would like to say right here that while I differ from him in some slight unimportant details, on the whole his paper struck a very responsive chord in my own heart. The following is a quotation from his paper:

"The ideal of securing individual efficiency through restraint and command will have to give way sometime before the more efficient program of opening the way for individual self expression. Not that no one should lay out tasks for others; or that vast numbers of workers should not make their methods conform closely to one most efficient standard. An opera singer may fittingly follow the directions of her managers as to routes of travel and concert dates; a great engineer or builder may conform in detail to specifications drawn up by others. The point is that

<sup>1</sup>Bulletin of the Taylor Society, Vol. II, No. 4, November, 1916.

while one individual does many things that others plan, he should have some things to plan himself. That is what man is for. *To neglect to utilize and develop the unique originating, choosing, and adapting power with which every individual is more or less endowed is to waste the earth's greatest resource*, for which the growing complexity of industry and the arts will ever make greater demands. Besides, to deprive man of the opportunity to create is inhuman, degrading and destructive for the individual, the ruination of pleasure in work, of romance and achievement in life."

I have reached the same conclusion as Professor Drury, with reference to recognizing the inherent right of every man to exercise his creative faculty and thereby realize the sense of joy and freedom which can come only through expressing one's self in the day's work.

I do not believe that I am open to the criticism of being impractical, for my conclusions have been reached while in actual daily contact with management problems.

Professor Drury's clearly expressed statement sums up what seems to me to be one of the most important phases of management and I believe that the criticism which my discussion of Mr. Green's paper brought out at the Philadelphia meeting, justifies to quite an extent his contention that we have not been scientific enough in dealing with this very important subject of stimulating the thinking, reasoning power of the workman, thereby making him self-reliant and creative.

The criticism of my written discussion of Mr. Green's paper at the Philadelphia meeting, in October, showed clearly that quite a few members of this Society do not realize what it means to the workman to be denied the opportunity to do creative work. By this I mean the kind of work in which he can express himself, through being furnished with means for realizing his progress; work, in other words, which appeals to his reasoning power and intelligence.

The statement was made that I am fundamentally wrong in my discussion of the theories of management because I place so much emphasis upon this point, so I am going to make an effort to show why I believe this individual creative process must be recognized and consciously dealt with. The members of this Society, I am sure, are giving much more opportunity to the workman to use his initiative in the performance of his work than they realize, otherwise they would not be successful managers. I believe it necessary, however, to call attention to the danger of carrying the realm of so-called scientific facts, or "exact" science beyond its proper sphere.

In order to show you why I believe we are pushing the realm of "facts" into a field where it does not

belong I have brought with me some charts which will illustrate what I mean. Before showing these charts, however, I should like to define what it seems to me we can classify as three great fields, or forces, which we managers are working with, and their relationship to one another.

The first we may call the field of nature and in this field the natural or generic, laws are the great dominating factor. It is the function of scientific research to discover and record these laws, which have to do with the character of our raw materials and the effect of the various conditions of manufacturing upon the conversion of these raw materials into the finished products. These laws in the field of nature are recorded in such sciences as chemistry, physics and mechanics. Mr. Taylor's classic analysis of the factors entering into the art of cutting metals was clearly an exploration into this field.

The second field has to do with what has been designated "The Will of Man." This will is essentially free and creative in essence, and has dominion, as it were, over the generic law in proportion to its intelligence. In other words, man's power to change the destiny of nature depends upon his knowledge of the laws of nature and his wisdom and intelligence in *creating conditions* for the specialization of these laws. It is our failure to recognize this "originating, choosing and adapting" power and to direct it scientifically into positive constructive channels that has caused it to turn into a negative, destructive force, retarding the spiritual development of the human race.

The third field, or power, is much more difficult to define, but it no less than the other two is a distinct aspect of life. We might define it as the great universal, unifying principle, of which the self-conscious faculty of man is a particular manifestation. In our industrial organizations its emanation shows as what we call "esprit-de-corps," and it is generated by instilling into the minds of the men in the organization a consciousness of their place in the great scheme of things and a willing desire to co-operate with their associates. In other words, we must plan to develop not only the self-conscious faculty of our men, but also a consciousness of their unity with the whole: a sort of universal consciousness, as it were. Organization consciousness, or plant individuality, can be genuinely obtained only when this power is thoroughly recognized.

It is my intention this evening to deal principally with the first two aspects of organization work and to give you, to begin with, a few illustrations of what we look upon as the natural, or generic field; then show how when we obtain a knowledge of this field we make it possible for a *constantly increasing* number of men to utilize this knowledge. In this way