

ment fails to do the things here set forth, individual efficiency is obstructed if not made impossible. It will take a long time to fulfill these elementary duties, to provide these basic conditions. What we have in this formula is really a formula for efficient management. And this is as it should be.

Unless management uses its powers wisely and skillfully to remove the obstacles to good work, it can have no right to find fault with the workman. He can do but little as regards the physical conditions, the mechanical equipment, and he should not be expected to do much with respect to these things.

But if the time comes when management has done all that science can suggest by way of providing the best of material, methods and tools, what then of the workmen's efficiency? It seems to me that the fundamental problem raised by Mr. Fisher's paper is this? Who is responsible in the last analysis for efficiency? Is it management alone? Or is there a science of man power which can teach us that only by a more genuinely intelligent insight into the question of directing the energies of men can we arrive at a true distribution of responsibility? I submit that we have as yet but barely touched the fringes of such a science. We look upon the workman as a "passive bucket," and so long as we do so we do not get, and need not expect, those exertions which count in successful production. Whatever may be the excuses for it, the pitiful truth is that the workman himself, that labor, insists on supporting its position of self-imposed inferiority in the production program. A dignified, a self-respecting attitude on the part of labor, generally speaking, would insist on a share of the functions which have to do with efficiency. Labor will continue to be a poor relation in industry until it courageously undertakes those responsibilities which are largely and mostly within its own control, if it but knew it. The common sense view would say that when a man is engaged in selling his time, labor power, and producing skill, he would in self-interest, and in the interest of his craft standard, see to it that he provided those helps which now management is forced to provide; helps by way of training, fitness, health, discipline, and satisfactory output.

Management has no choice today but to make these provisions, but it does so at a sacrifice which is costly for labor that has not as yet seen the wisdom, the strength, and the economic potency in being the all-round expert that it should be with respect to its own industrial contribution. It seems to me that here is the way of hope. There is no other; for concessions gained through force, discord, and even bargaining,

necessary though they may be in the circumstances, can never have the permanence and vitality which mastery of the job can give. The secret of power is mastery of the job. That alone counts in the economic result. It would seem as if management is obliged to furnish the initiative and the stimulus for this higher level for labor. But it is worth the effort, because industry has everything to gain by a scientific redistribution of responsibilities, with all the training values that it implies. When efficiency becomes the common concern of both the management and the labor forces, each making its appropriate effort to this desirable end, we shall be nearer to a real partnership in production than has as yet taken place.

F. C. CLOTHIER.<sup>1</sup> Mr. Fisher's chart is a valuable contribution to our conception of the efficient workman—and what makes him efficient. In its various brackets it includes most, if not all, of the known factors entering into the development of the worker's efficiency on the job.

It might not be out of order to lay emphasis upon a point which Mr. Fisher has already covered; namely, the need for the conscious consideration of the worker as an individual, rather than as a member of a group which responds in one way to one stimulus and in another way to another. Industry is becoming more and more aware of these differences between individuals. In recent years industry has made considerable progress in methods of ascertaining and utilizing the special abilities and potentialities of the individual worker. That men differ in skill is, of course, obvious. That men differ in *kind* of potentiality is becoming equally obvious. We must exercise the greatest judgment, not only in the selection of skilled men for work requiring their skill, but in the selection of green help to learn this work or to receive this instruction or that course of training.

Mr. Fisher's chart provides for such individual differences under "proper initial selection," "assignment," "supervision," "physical development," etc.

But this recognition of the differences between men must not be restricted solely to their abilities. Mr. Fisher divides this chart into two wide divisions; first, the ability to work, and second, the willingness to work. Limited as our knowledge is of the factors which enter into a man's ability to do this work or that, our knowledge of those intangible motives which impel him to do this work or that, is lacking in far greater degree. Yet the differences in individual motives exert a pro-

<sup>1</sup> The Scott Company, Philadelphia.

found influence upon individual efficiency, according to whether those individual motives are harnessed or not harnessed to the individual's work.

We are all familiar with Captain Bairnsfather's soldier, utterly dejected and discouraged, who was haled before the captain by the sergeant.

The captain asks, "What's the matter with him, Sergeant?"

"I dunno, sir. All 'e 'as to do was to walk all day around the camp ground and pick up cigarette butts and scraps of paper on the point of a stick, but 'e don't seem to 'ave 'is 'eart in 'is work."

Our problem is so to harness the individual motives or interests of our workers that their hearts will be in their work.

Very little progress has been made along this line and a vast opportunity for intelligent research opens up.

One small-parts manufacturer of the Middle West, for instance, made a study of efficiency and stability in certain of its departments with relation to mental alertness as approximately by the workers, relative retardation in school. It was found that in the Inspection Department, where the work was extremely monotonous, the labor turnover varied directly with the mental alertness. Only those workers possessing minds of the plodding routine type found satisfaction in the work.

On the other hand, in the Assembly Department, where the work calls for a high degree of initiative and judgment, the turnover was highest among those of poor mental attainment. The men possessing active minds, not the plodders, were the men who found satisfaction in the work.

This is merely a relatively crude instance of the kind of research which might prove extremely valuable in furnishing data whereby management might control and utilize the individual motives of its workers.

Before closing, may I call attention again to the fact that Mr. Fisher has divided the problem into two general parts—the first, the worker's ability to work, and second, the worker's willingness to work. May I for a moment suggest for your consideration a point of view which calls for a third general factor which we might call *the opportunity to work*.

Let us interpret this term not in its vernacular sense; but rather interpret it as the man's position or job or occupation. Then, in the case of each worker we find that we have three elements to develop and coordinate; first, his ability to work; second, his willingness to work; and third, his opportunity to work. So far as it is possible, these three factors should be well-balanced in the case of each employee. He should be so adjusted to his work that, first, he will have the special abilities

and potentialities enabling him to meet its requirements; second, he should possess those special interests and motives which will cause him to find enjoyment and a sense of achievement in the work; and third, he should find in his work, in its duties and responsibilities, the opportunity to exercise those abilities of his and to satisfy those interests of his. If we can accomplish this perfect balance, then we have a truly efficient workman.

The need for this balance is emphasized when we consider what takes place when the balance is lacking. Let us suppose, for instance, that our hypothetical worker is well-equipped with the special ability required in his position and that his position contains ample opportunity for the exercise of those abilities, but the worker has little or no interest in that work. In that case we find a worker who is inefficient through sheer inertia. We are all familiar with instances of this kind.

Second, let us suppose that the worker is highly interested in his work and that his position offers ample opportunity for the exercise of such interest, but the worker lacks the necessary ability, whether it be skill or technical knowledge or education or any one of a dozen other *kinds* of "ability"; in that case we have an employee who is probably committing a series of costly blunders.

In the third place, let us suppose that in his job the opportunity is lacking for the worker to utilize his abilities and to satisfy his interests, then we find a true instance of the blind-alley job, usually so fictitious; we find a worker who is probably growing less efficient rather than more efficient and certainly one who is discouraged and thinking about getting a job elsewhere.

Mr. Fisher's chart is going to help clarify our views on this interesting and vitally important subject, and I congratulate him upon the clearness with which the matter has been presented.

NELLE SWARTZ.<sup>1</sup> I am glad that Mr. Bloomfield preceded me in this discussion, as he has so ably discussed many of the thoughts I have had in mind, regarding Mr. Fisher's "Formula for an Efficient Workman."

After I had read over Mr. Fisher's paper, I began to wonder just what efficiency is. Going to Webster I found that efficiency means "Causing effects; producing results; effectual; competent; able." If the aim of Mr. Fisher's formula is to produce an effectual, competent, able workman, or a workman who will produce

<sup>1</sup> Chief, Division of Women in Industry, Department of Labor, New York.