that the exact knowledge of daily output necessary for direct payment by results cannot be obtained without disproportionate expense. This has been most conspicuously true of the expense of inspecting after each operation and of figuring quality ratings in those few places where direct quality incentives have been attempted. There are many places where the difficulty or the expense of standardization and of exact measurement of results are so great that time payments in one form or another are far better than any form of piece payment.

4. *In considering the effect of any financial incentive, its effect on the whole problem of production, not just upon output, must be considered.* To an embarrassing degree an incentive on one element of an employe's value tends to a slighting of all others. If we put a variable rate on ouput only, we cannot, as has been stated, expect the worker to maintain an equivalent interest in improving quality. As the differences between group and individual rates indicate, if we pay for individual productivity only, we must not be surprised if the individual fails to embrace opportunities for co-operative action. No form of immediate financial incentive adjusts the pressure of financial interest uniformly.

5. *When all is said and done, much of the best value of an employe is too intangible for reward and, therefore, for stimulation by any form of financial incentive, even the time rate.* Men are too complex and too individual ever to be reduced to slot machines whose entire effort can be compelled by the insertion of a coin. Valuable as financial incentives are, their limitations must not be overlooked. Primary among these is the fact that they do not reach the invaluable voluntary co-operation and effort which each workman can, but cannot be forced to, give.

Moreover, the financial desire is not the only great force in man. In considering his conduct, his whole range of fundamental desires must be recognized.

His desires for self-respect, for respect of others, for self-expression and for justice are also powerful forces within him. His fears of social pressure, of loss of job or prestige, and of injury or unemployment are likewise powerful. These are fundamental factors that in any shop must be considered. How the working out of the financial incentive affects these forces is always a pertinent question.

A financial incentive is never the whole story. We do not introduce financial incentives in a vacuo but in a condition—we do not apply them to one desire but to the whole man.

Conclusion

Since whatever makes the receipt of pay operate to stimulate greater effort likewise operates as a financial incentive, the possibilities for variety in the composition of a plan of financial incentives are almost unlimited. Moreover, what renders any program effective in inducing effort is its relation to the needs and conditions of the particular work room and workers. Consequently, success in developing financial incentives rarely consists so much in transplanting a fully developed plan as in evolving out of the sweep of possibilities a program of incentives that has been developed in full understanding of the conditions of the particular work room. Besides, the fullest success in developing financial incentives involves bringing about the development of shop conditions and of the work room management so that they interweave with the incentives and together make a consistent and unified whole. Financial incentives cannot be successfully considered as a thing apart from management. They are an integral element in management and with it form an inseparable whole.

Since financial incentives cover but certain aspects of the employe's value and appeal to only certain sides of his nature, other aspects of his environment and of his character influence his conduct. And yet these other values and other sides of his nature are in turn affected by the character of the financial appeal. From this aspect also financial incentives are an inseparable part of the task of management.

The task of management still remains. Financial incentives are in no sense a substitute for management. Instead, the more precise and direct the financial incentive employed, the more highly developed must the management be to cope with it. They make management more difficult, as do most advances in managerial technique, but they also make a higher degree of management possible. If they are suited to conditions, if they are made part of the general structure of control, if they are employed by an understanding management that realizes *their* nature and *its* responsibility, and if they are recognized as only one element among the forces that influence employe effort, they can join with the other forces inducing effort and bring out response that could be secured in no other way. If they are properly employed, financial incentives are not a means of reducing man to a mercenary mechanism. If they are properly employed the line between financial and non-financial incentives fades. The problem becomes one of employing the financial appeal, together with all that causes man to strive for attainment, to bring employes and management alike to join forces vigorously in a common understanding.

Discussion

Robert B. Wolf.[1] The title of Mr. Smith's paper, "Financial Incentives—An Inseparable Part of Management," implies that he believes them to be necessary.

My own experiences prevent my agreeing with him. Furthermore, I believe I can show from his own words that the difficulties encountered from their use are so great as to make them not only unnecessary, but also undesirable.

Mr. Smith defines financial incentives as "any measure which increases the effectiveness of pay as a stimulus to productive effort," and he further elaborates this in his first general principle by stating that "the effectiveness of any form of financial incentive depends largely upon the degree of reliability with which the reward varies in proportion to the value rendered."

While he endeavors to show that straight day rates, under certain conditions, act as financial incentives, it is clear that he does not really regard them as such, for he states quite definitely that "a flat rate is an incentive to attain mediocrity," and that "to pay by the month, week, day or hour is to provide no immediate financial incentive whatsoever." In my discussion, therefore, I am going to proceed upon the assumption that Mr. Smith will accept the following definition:

A financial incentive is a stimulus deliberately applied from without, upon the individual or group, for the purpose of increasing the amount of work done, by arousing the acquisitive instincts of the workers. It is so applied that the worker is always conscious that the amount of pay he receives is the immediate and direct result of the amount of work he does.

[1]President Pulp Bleaching Corporation, New York.

This definition removes methods of payment for straight clock time from the category of financial incentives.

Let me state my own position at the outset: I believe I have a right to stimulate my own acquisitive instincts, if I choose to do so, but I do not believe it is right for someone else to stimulate them for me. Providing an industrial environment where the worker can be progressively promoted from a lower to a higher paying job is quite a different thing from having him constantly stimulated in each job by dangling a material reward before his eyes. All forms of financial incentives exert what Mr. Smith refers to as "financial pressure" upon the workman. He calls attention to the coercive speeding up which resulted from the use of differential piece rates, which have been largely abandoned on account of the hardship to the learner, for they were "aimed to discourage all but the outstanding workers." The practice of setting severe tasks, "because of its harshness both upon the worker and the management," was abandoned: first, as Mr. Smith indicates, because it was discovered that they could not reach the invaluable, voluntary, co-operative efforts of the workers, and, second, I believe, because the accumulative resistance of the workers to coercive measures loaded upon the management an ever increasing burden to do most of the thinking. Management, rather than the individual workers, had to determine the most effective way to cope with each particular situation, something quite impossible of attainment without robbing the worker of his normal desire to express individual initiative. It is probably this resistance of the workers to having their thinking done for them that caused Taylor to encounter so much "soldiering" on the job.

I am inclined to think that Mr. Smith has been so preoccupied with the task of job and rate setting that he has not had a chance to get sufficiently close to the worker to find out how unnecessary and undesirable it is to apply individual financial pressure. I am not, therefore, surprised that he finds "no step in the introduction of direct payment by results is more important than discovering as nearly as possible the ideal 'one-best-way' and then seeing that conditions are maintained at that standard." This sentence explains why management has loaded such a severe task upon itself,