

important matters. Already certain union groups are taking the initiative along these lines.

Until these intimate vital factors are smoothed out the relations between capital and labor are bound to remain on a fighting plane.

What can be done about it? The answer can best be made by indicating some of the results that are being accomplished at the present time. In certain foundries accurate rate setting is in operation. In a few clothing factories standards of production are being utilized. In mining there have been pointed out certain rather remarkable developments in methods.

In shoes, a few manufacturers are beginning to figure rates in a scientific manner to adjust the inequalities which are now so universal. In one case, for example, it was found necessary, in order properly to balance the individual rates, even on operations handled by the same worker, to adjust them from 10 to 40 per cent both ways. Finally it has been found possible actually to set accurate rates on new styles of shoes with no trial procedure of any kind. Such developments as this take away one of the chief bones of contention between employers and the workers.

At the present time, sums running into millions are used each year by both employers and workers in fighting for higher, or lower, or fairer rates. This money and effort, if spent on constructive work, would prove of far reaching benefit to industry as a whole and to the working man in particular.

Morris L. Cooke.⁹ It is fortunate that management has come to assume that the formulation of labor's policies is labor's task! It is because we are convinced that Mr. Green—leader of millions—voices sentiments stirring at the very heart of the labor movement that this is a great moment for those who not only vision industry encompassed by law and order but see in work properly conducted the possibility of a great new adventure for the race.

Both in our political life and in industry we must erect safeguards against the leveling process growing out of mass action. On the other hand we do not hold the idea that democracy—whether political or industrial—necessarily implies mediocrity. I have often wondered whether it might not be possible for labor unions to be a bit more tolerant of experimentation—

⁹Consulting Engineer, Philadelphia, Pa.

of deviations from the standardized practices found desirable for the movement as a whole. For this reason I regret the 100 per cent opposition which Mr. Green has voiced toward company unions. I hold no brief for them. I understand their very distinct limitations and detect back of many such plans shortsighted and even highly improper motives. But it is also true that they frequently are sincere efforts toward a more enlightened industry and usually are training stations in cooperation. Perhaps some day labor unions may feel strong enough to permit experimental union plants where promising principles and practices may be tried out under friendly and dependable auspices. In every other avenue of human endeavor a certain amount of experimentation must precede wise and progressive action. Perhaps management may aid in providing the setting where labor unions may enjoy more freedom in this respect than has been possible in the past. If and when such plants come, I suggest they be called "service test" rather than experimental plants.

Several problems have come up in my own practice in the last year or two which are incapable of solution in the absence of such cooperation as Mr. Green has described. One of them will serve for an illustration. It is commonly recognized among electrical engineers that the power load curve of a typical industrial plant is irrational and does not correspond with what might be presumed to be the production curve. The power demand reaches a peak at about ten in the morning and then falls off rapidly to the noon hour. In the afternoon another peak is reached at about three. The demand then falls off rapidly until five. The afternoon peak is almost never as high as the morning peak. Engineers attribute these vagaries in the load curve to "fatigue," "sabotage" and "the piece work system." But no one really knows who is responsible for what appear to be variations from a logical production curve or in what degree labor and management are jointly responsible. A real investigation is impossible except on the basis of mutual interest in getting at the real facts and a mutual regard as to investigational methods.

Some years back in an address by Robert G. Valentine given at a meeting of this Society, the profession of management engineering took the first step on the road that has brought us to this far-reaching offer of labor to cooperate in cutting out waste, in amplifying production and in otherwise rationalizing industry for the benefit of mankind. Fifteen years

ago Valentine was a voice crying in the wilderness. We did not sense his message. The significance of consent as a factor in industry was not widely understood. But fortunately we have long since discovered our mistake and admitted it. I believe it adds to the impressiveness of this occasion to recall the earlier one.

It should hardly be necessary to remind this audience that in industry as in international relations there is a technique of cooperation as well as a technique of strife. God knows that in both fields the latter has been all too fully stressed and developed. We are just beginning to recognize the first few principles of cooperative effort. A technique for industrial cooperation is all but unknown. Hence it behooves every one at interest in these matters—especially management—to be very, very patient with these "small beginnings." Those of us who have caught the vision—especially those of us who have had this opportunity to sense the obvious sincerity back of Mr. Green's remarks—are obligated to hold this front line trench until reinforcements come up. To the high task of "filling in—not bridging—the chasm between capital and labor," to use Taylor's own words, the Taylor Society should re-dedicate itself.

Percy S. Brown.¹⁰ Mr. Green has very convincingly and frankly stated labor's position with regard to cooperation between labor and management which will result advantageously to all the elements in industry. I wish, however, to emphasize the fact that management cannot act immediately in attacking the problem, and that any attack must be prolonged and well sustained. To expect immediate results would be to encounter discouragement at the outset. We must plan very carefully and expect momentum to be gained slowly, and must bear in mind that though the Taylor Society represents advanced thought in management; it is not in a position to guarantee immediate results. Management, however, will be found to be in absolute sympathy with labor's program with respect to cooperation, and will do its utmost to attack the problem promptly and effectively.

Closure

William Green. As Mr. Percy Brown has said, the results which will come from the meeting this

¹⁰Works Manager, the Corona Typewriter Company, Inc., Groton, N. Y.

evening and the events leading up to it will be slow. The leaders of labor recognize that well. On the sides both of management and of labor, there are prejudices of long growth to be overcome, and it will take time to accomplish this.

As an instance of the old feeling, I might tell a story of what actually happened during a negotiation regarding wages and conditions in one of the Pennsylvania coal mines. A miner, a big fellow, was appointed on the bargaining committee by his local, and when the discussion began as to who the remaining members of the committee should be, he spoke up declaring that there would be no need of any additional members; that he himself could lick the mine manager without assistance.

The sense which the workers have had that they have been exploited in various cases by unscrupulous owners or managers will take time and the action of public spirited managers and owners to overcome. I might illustrate this by a case that occurred, a somewhat extreme one, in the Hocking Valley mine in Ohio. Coal miners are paid by the ton, each car being weighed on track scales and credited to the miner who excavated it. In this case the miners complained that they were not getting full weight. It was discovered that the track scale used had been tampered with, a rubber stop being inserted in the indicating mechanism in such a way as to set a limit to the weight recorded no matter how much coal in excess of that weight might be on the car. By this arrangement, of course, the miners were continually robbed of their just wage.

Conditions and states of mind indicated by both these instances, which of course might be multiplied many times, stand in the way of the cooperation which labor leaders and progressive managers desire to bring about. But it is our belief that such conditions and states of mind will gradually disappear as the benefits of cooperation to both parties appear.

Progress towards these things requires the education of management and the education of employees. It means we must learn the spirit and methods of working together which are not things that can be learned by precept or formula, but must be evolved out of the process itself. Let not one of us be deceived as to the difficulties of the undertaking; but, on the other hand, the benefits and advantages to be gained are worth all the difficulties and the perplexities that are required for the achievement. Labor stands ready and willing to do its part.