The present day awakening to the importance of the human element as a management factor in industry

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THE PRESENT DAY AWAKENING TO

THE IMPORTANCE OF THE HUMAN ELEMENT

AS A MANAGEMENT FACTOR IN INDUSTRY

By

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NECESSITY AND VALUE OF COOPERATION

In modern industry, the science of machinery is constantly being improved. In its selection, construction and use, nothing is left to guesswork. Selection is made on a basis of its exact fitness for the work it will be called upon to do. It is constructed of materials which must pass especially devised tests to ascertain the proper materials. It is so designed that all possible lost motion is avoided, in order that the largest possible percentage of the energy going into the machine will produce results in the form of product turned out. The correct quantity and quality of lubrication is used to reduce friction to a minimum, in order that the machine will not rust or wear more than what cannot be prevented. The machine is run at a speed which will turn out the greatest amount of product consistent with quality of product and avoidance of strain on the machine. The conditions under which it works are carefully studied and every effort is made to maintain these conditions.

But there is another element in factory equipment, which must direct the machine and make it useful—the human element. The present methods of handling this factor are very far from being as well advanced as those of handling the material problems. Those who have awakened to the realization of the importance of this human element have usually approached the subject from the wrong angle, and they have learned only by bitter experience, the necessity of greater attention to this phase of industry.

As industry has progressed thru its various forms, there has been a growing tendency toward a divergence of interests between the employer and employee. A half century ago the owner and his employees worked side by side; each knew and called the other by his given name. The owner attended
to the details of administration, in which he often consulted his employees, but these duties were few. He supervised the work they did; he was one of them, and they felt they could appeal directly to him. As business grew, little by little the owner-employer found it necessary to spend more and more of his time looking after the administrative affairs of his business, until they became so heavy that he employed an assistant— a foreman— to take over the work of managing the shop. As industry grew still larger, the work of the plant was still further functionalized. The owner's place, as such, has been taken by the stockholders, most of whom have very little to do with the administrative policies of the plant. The gap between the operatives and the owners is filled by a large number of foremen, sub-foremen, superintendents, managers, directors, etc. The workers very seldom, if ever, even see the one who is at the head of the factory. They are made to feel that their only duty is to obey orders. The person relationships have entirely disappeared with the advent of the present large-scale, technical and impersonal system of operation in industry.

As a corollary to the growth in the size of the plants has been the so-called specialization, with the work divided into minute parts, each employee performing only one or a few of them. In the former years a man started work on the product and worked on it until it was completed. He was the only workman whose hands touched. He had a feeling of pride when it was done—he had accomplished something. He could see and realize that he had something tangible as the result of his efforts. All his thoughts and attention had been directed toward its perfection.

The increase in population, the development of the country, and the rising standard of consumption caused an increase in the demand for output.
Industry had to be adjusted to meet this increased demand, and the adjustment was a technical one as contrasted with a personnel one. It was only natural, because the employer could see tangible results of a technical development of his business, by the dollars he accumulated. So the power-driven machine was introduced, and the productive capacity of industry was increased correspondingly.

The employee now finds himself working on detailed specialized operations, with the opportunity to express his personality in his output gone. He cannot see any tangible results of his work. He starts in in the morning turning nut No. 15 four turns to the right and keeps on turning nut No. 15 four turns to the right until the whistle blows at night. Next day he begins turning nut No. 15 four turns to the right, and every morning for weeks, months and years. The longer he performs his duty, the more mechanical it becomes, and the more monotonous it grows. In order to keep from either going to sleep or insane his mind begins acting. Sometimes it does not function reasonably and sensibly. He and some of his fellow workers pool their thoughts and they draw conclusions which may be wrong and inaccurate. He figures out the amount of work done, the wages paid, and the money the employer gets for his product. Of course, without having had any semblance of an idea of the other costs of doing business, which the employer must meet, he comes to the conclusion that his employer's profits are too great. That is the only logical reasoning to him. He demands shorter hours and higher wages. He knows nothing of the real factors that enter into the production and sale of materials, and it is little wonder that his conclusion is as it is. Overhead costs mean nothing to him. So far as he is concerned, they do not exist.
During the World War, prices, then wages, went way above normal. When demand fell off in 1920 the prices had to go down. The workers could see no reason why, if it was profitable for the employer to pay high wages in war times, it isn't just as profitable after the war is over. The economic conditions and factors entering into the situation mean nothing to the worker. If the employer proposes and puts into effect a lower scale of wages, the worker looks upon his action as an exploitation, due to the increased supply of labor. Of course, some employers do take undue advantage of such an increase, but the workers reason it that way whether it is true or not.

When demand for products decreases, or when productive capacity increases to a point beyond that necessary to supply the demand, the producing industry cannot meet the situation by decreasing the productivity of each of his employees, because of the amount of fixed overhead costs. Instead of increasing productivity, which would only make matters worse, he must see that all production is done by decreased cost per unit. This is usually done by still more specialization and other technical devices, such as wage incentives. If these fail—and they usually do—resort is taken to profit-sharing, welfare work, etc., in the trial-and-error method of finding how to increase output and decrease costs.

The difficulty lies in the fact that the employer is attempting to substitute elaborate mechanisms for good management and leadership. He expects the employee to solve his own problems, because he—the employer—has the technical side of the industry to manage, the buying of materials, selling of the product, and always watching the competition of his rivals.

With the opportunity to cooperate with the employer as they did in former years taken away from them, the employees find themselves engaged in a war-
fare, in which the employer seeks to increase profits at their expense, and they seek to increase wages at the expense of their employer. The attitude of the employees came to be one of indifference to the effect of their demands upon industry. "We want wages," they would say. "Where they are to come from is the employers' business. Let him worry."

The attitude of the employer was identically the same. "My employees have no business interfering with my business. I pay them to work, and I want output. If they don't like their jobs, let them worry. This is my business, and I can manage it without any interference, either from my employees or from the public." After he has managed it to suit himself for a time, paying no attention to the suggestions or the welfare of his employees, he comes one day to a point where his employees refuse to work. Then he forgets that this is his business run to suit himself. He appeals to the public to protect him by police and moral pressure against his mistaken employees. He appeals to his employees to come back and save his business. He is willing to show them that conditions make it impossible to meet their demands, when before he considered it none of their business.

It is obvious that industry cannot prosper under such conditions. Cooperation is inevitable if industry is to progress. The hand, the eyes, and the ears must recognize each other's value. It is waste of time and energy to claim class distinction between them. It is a fundamental fact that no part of the industrial body can be damaged without injury to the other parts.

John D. Rockefeller Jr., invited the attention of every employer and every employee to the fact that the great industrial-movement-forward has started, (1) when he expressed his belief in a newer relationship between

(1) Reference No. 56
Capital and Labor—a relationship that gave the worker his say about the conditions under which he should work. The International Harvester Company's announcement of its new internal relationship with its working forces made those who had just begun to sense that something was happening, "sit up and take notice."

"Goodwill of employees is coming to be an intangible asset of business more valuable than the tangible properties" in a great many concerns, and by no means a negligible quantity in all firms. "It is the life of a going concern." (2) There are hundreds of business men who place a higher value upon their business goodwill, commercial goodwill, trade name, trade reputation, etc. than upon the physical plant and inventory of stock on hand. Why may goodwill be so valuable? Because it places the business above the average of competitors, and enables it to thrive without cutting prices.

Industrial goodwill is also valuable because it places the employer above the average of competing employers by giving him a more productive labor force than theirs in proportion to the wages paid. This brings higher profits, which in turn makes the stock and bonds of higher value. Commercial goodwill of customers, bankers and investors, and industrial goodwill of laborers have their market value. Without them the tangible property is a liability rather than an asset.

"But goodwill is fragile. It is not merely past reputation; it requires continuous upkeep thru continuous repetition of service. It breaks down easily by deterioration, but it is built up on the most fragile of assets, the freedom of the will of customers and workers. It cannot be wound up and allowed to run itself like a machine. It is not an exclusive monopoly.

(2) Reference No. 17, p. 26
protected by law like a patent right. It is just the intangible chance of making a contract if you can. It is menaced by competitors perhaps just as free and able as the owner to build up their own goodwill by making contracts." (3)

Numerous and varied methods—some artificial, some sincere; some successful and some failures—have been put into use by employers and managers for the purpose of bridging the gap that exists between the employer and employee, and once more creating pleasant relationships and fellow-feeling—the industrial goodwill that existed before the so-called industrial revolution—the feeling of satisfaction and contentment on the part of the employee that he would rather work for his present employer for half the wages paid by a competitor, rather than leave his present job. There is no panacea that has ever been suggested, or perhaps ever will be suggested, that will prove a cure for all differences between employer and employee, but some methods have, and some are destined in the future to, be more satisfactory than others.

(3) Reference No. 17, p. 26
The early idea, and also that of a large number of employers today, altho the number is relatively diminishing, is that of treating labor as a commodity on the commercial principle of barter. It is perhaps the most natural way for the employer to conceive of labor. He employs labor in production in the same manner in which he does raw materials and all other commodities. He reasons that the salable value of his finished product is the sum of the costs of the various items entering into the production. He buys in the cheapest market, and sells in the highest, and usually does not even see his commodity. He tries to obtain the best of the bargain in quantity of goods exchanged or money received, while the purchaser tries to get the best of the bargain by obtaining the largest quantity or best quality of goods for the goods exchanged or money paid.

If the supply of labor is abundant he will negotiate a purchase at a low figure; if the supply is more scarce, or if he has urgent need for it, he will pay what he has to pay for it, and no more. As soon as the supply becomes more abundant, or his temporary need dwindles, he reduces wages proportionately. If the employees object to the reduction, he promptly hires others from outside who are out of employment. The law of supply and demand operates perfectly.

He maintains that he is not forcing his men to accept lower wages, nor reducing their standards of living, for they are "free to quit and go elsewhere if they can get more. They can take it or leave it alone." On the contrary, he reasons, he is helping humanity, by giving employment to those who have none, if his present employees find better paying jobs elsewhere.

The commodity conception of labor has perhaps been for the most part the result of the evolution of the business unit to its present state. With
the change from the single proprietor's shop to the factory, then to a limited partnership, and finally a great corporation, the personality of the individual laborer has been lost sight of. When the desire for large scale production became paramount as the result of competition, then the personality of the worker was entirely overshadowed in the struggle for lower costs of production and increased dividends.

As a result of this theory there has come to exist a constant fear on the part of the employees lest they should lose their jobs. The worker's most important possession in his job. Upon it depends his health, living conditions, his happiness and that of his family. If he loses it, he cannot rely upon accumulated wealth to support himself until he gets another one, because he rarely has much capital saved up. If he does, it has been saved as the result of much sacrifice, and he loses heart when he sees it rapidly vanishing. He cannot readily start out on a new line of work because his only training is that received thru experience. He cannot enjoy life until he finds another job, because he cannot be happy when the family pocket book is empty and the rent is due. If he believes himself to be unjustly separated from his job, he becomes one of those who during the last few years are known as "Bolshevists."

A typical illustration of many laborers is told by Miss Mary VanKleeck of the Sage Foundation (1). A young girl whose trade was that of making artificial flowers, for weeks at a time would have no work, and her unemployment nearly always came when she needed work most. She said "I am awfully scared they will lay me off. The worry makes my head ache so I can't sleep nights."

A curious outgrowth of the supply and demand theory of labor, so far as any single plant is concerned, is that in hard times, when there is an over-

(1) Reference No. 13, p. 146
duction of that plant's particular products, in relation to demand, the workers still further increase the overproduction by working harder. In good times, when demand exceeds supply, the workers further reduce output, because they can get another job somewhere else just any time, if they get fired. If there are no other jobs to which workers can turn if they lose their present one, the labor turnover decreases. If jobs are numerous the workers will not fear losing their jobs. This is not good business from any standpoint, and it is because management has not utilized security of employment for purposes of assuring employees of work in place of fear of unemployment. The manufacturer reduces his output when there is an over-supply on the market, but the laborer increases his efforts. One employer who held to the commodity theory remarked of the condition in his plant during a period of prosperity, "Yes, these fellows won't work now, but hard times will come, and then we will soak 'em."

With such a theory of fear and retaliation prevailing, industry cannot expect to reach the level of which it is capable in this day and age.

Some employers take great pride in the fact that they are able to secure labor for less than the Standard rate, or that they have evaded wage agreements with labor union members and got work done at lower rates than the union scale, by changing the classification of the work, or the distribution of the work to them. Others "get even" with their employees if they are forced to raise wages, by some new and different arrangement in the factory. A certain factory manager (2) when a wage dispute, settled by arbitration, resulted in compelling him to raise the wages of hewers, immediately advanced the price of explosives that the men had to purchase.

(2) Reference No. 65, p. 45
He did not have the foresight to see that the men would retaliate by restricted output, wasted material, etc. In some factories, managers have offset forced increases in wages by a charge for hot water for washing before going home, increased fines for tardiness, mistakes in operation, and in various ways reducing the net income of the laborers.

Some methods used to obtain employees illustrate the disregard for the laborer, in an effort to secure his labor. A factory in New York (3) with a maximum capacity for about 250 workers, advertised for a long period in 1917 for a thousand women, with a certain wage guaranteed per week. It was not explained in the advertisement that the stated wage was paid for only two weeks, after which time the worker was put on a piece work basis which brought her a wage considerable below this guaranteed weekly wage. The loss to the company in wasted advertising and excessive labor turnover might well have been saved by living up to the guarantee continuously. Another firm advertised in near-by cities (3) that the transportation of new employees was paid in advance, without stating that the firm proceeded to deduct that expense from the worker's wages, and refunded it only if he remained longer than three months.

Another result of this commodity theory is a condition similar to the operation of Gresham's Law in regard to monetary systems where more than one kind of exchange is in use. The better is driven out by the use of the poorer. Machines are used to displace skilled workers, laborers who operate machines without the use of power are displaced by power-driven machines, because less skillful and highly-paid laborers are needed to operate them. The labor of women and children can be employed at a lower rate than

(3) Reference No. 28, p. 33
that of men, not considering the effect upon the women and children. Girls who only need some extra spending money, replace those who have to support themselves and perhaps a family, because the former can afford to work for less. As a result, the better, more skillful, and stronger workers are driven out, leaving the inferior and weaker laborers, and the employer thinks he is saving expenses. There is a certain amount of justification attached to economy that results in a saving, but the "economy" that comes as a result of wasted health, and deprived happiness is not always a saving even to the one in charge of such processes.

The misconception lies in the consideration of the employee as a mere necessary ingredient in the production of a commodity, and after having extracted his money value in labor, the employer hands back the worker to his family and society, minus the labor, as something with which he is no longer concerned, nor responsible for.

The employer must come to realize the profound distinction between the laborer and his labor. There is a vast difference between the labor performed and the person performing the labor. It is difficult for a capitalist to understand this difference, for he and his capital are easily separable. He can transfer the power which his capital possesses to another. But the case of the laborer and his labor is not the same. They are inseparable—the laborer must go where his labor is wanted. His life and person are a part of his service. The power his labor represents cannot be transferred to another. There are those who ruthlessly exploit the person, in addition to acquiring the labor as a legitimate product, while some offer a sort of welfare work as a part compensation for the additional services rendered.
By far the largest number and the most important inventions for saving human energy and time have been made during the past century of any period in the world's history. Especially during the last two or three decades the managers of industrial establishments have been constantly striving for better results and efficiency thru the introduction of highly specialized machinery, and its substitution for labor. Better arrangements of buildings, better arrangement of machines and better sequence of processes have received scientific consideration in order to secure the greatest possible amount of production in proportion to the energy and time expended.

The growth in the size of the business destroyed the personal relation between the employer and employee. Differentiation of processes, division and specialization of labor which was the result, made the worker's tasks more simple and mechanical, and consequently more monotonous, and lessened the need for skill. The worker lost individuality and became merely an extension or attachment to a machine, easily obtainable, easily replaceable, and requiring little consideration and thought.

Workers in many instances were speeded up to the most rapid pace possible, no thought being given to the overtaxing of energies, because when a worker's usefulness was exhausted a fresh worker was substituted for the one whose energies had been exploited. The employer did not find it necessary to charge the worn-out worker to depreciation account, as he would in the case of a worn-out machine, because he did not own the worker as he did the machine.

Newly invented machines could do equally well the same amount of work as was previously done by hundreds of laborers, and needed only to be attended by one person. Often several machines could be attended by one worker who needed only to possess a fraction of the skill formerly required to do the
work by hand. The worker learned to adjust his actions, thoughts, and existence to the machine; and became himself essentially a machine, or a part of a machine—a cog, as it were, in the huge factory machine.

But being an assistant to a machine is not a position of interest to an average wide-awake man. So the wage system—a purely technical device—was looked upon as a means of supplying any incentive that might have disappeared with the advent of the "new order of things." Piece-rate systems of wages, with several different variations, were inaugurated with the idea of stimulating production on the principle of "paying by results." Once the employer installed this method, he thought that he had "hit upon" a system whereby he could wind up his factory, as it were, and with its wheels and cogs adjusted to the schedule of wages, he could go away and it would run itself. But the chief purpose of the piece worker then came to be to get as much money as he could for as little effort or thought as possible.

When the employer saw the income of his workers increasing beyond what he had expected as the result of increased effort, the temptation soon arose, and was usually yielded to, of cutting the piece-rate. Being his own business, he thought that he should be entitled to the "excess profits" going to the laborer, and proceeded to lower the piece rate, just as he would decrease the amount of lubricating oil he would use in a machine if he found that a less amount would keep it running just as well. The difficulty was in establishing a just rate of pay in proportion to the amount of work done.

Then there came into existence a number of various so-called "bonus systems." A man would be given, say one hundred units of work to do in a day, at a certain wage, with a bonus of, say 50% for producing more than the task laid out, the exact amount being determined by various kinds of sliding
scales, with a promise that the rate would not be lowered. He went to work enthusiastically, doubled, triples, quadrupled his output, and the employer became just as fully convinced as before that he had set the standard too low. The next development was not a decrease in the piece or bonus rate, but an increase in the task. Instead of being required to do one hundred pieces to earn his set scale of wages, thereafter he would be required to do two hundred. So the bonus system was only very little more successful than the straight piece-rate, if any.

Here is where Scientific Management came in. Mr. F. W. Taylor began investigations to determine what a reasonable task would be—what amount of work ought to be expected of the men. He accurately measured the task before the piece-rate was set, instead of leaving it to the old hit-or-miss, trial-and-error (with the emphasis on the error) method. Much as a mechanic would cut two pieces of steel so that one would exactly fit into the other by measuring them with minute exactness before trying to fit them together, so Mr. Taylor measured the task and the worker's capacity before the two were to be fitted together.

A new era had begun. Business looked upon scientific management as a cure for the evils incident to production and labor unrest. There would be no more unjust wage payments—they would all be based upon scientific measurements. Each job would be analyzed and possibilities of each job ascertained. Waste motions were to be studied, and short cuts developed. The job was to be standardized according to the easiest and quickest method of doing work. The time necessary to be consumed would be worked out to the finest degree of accuracy by the use of the stop watch, and after the standard time had been determined, those workers who could not attain the standard would automatically be replaced by those who could. Science would be
employed to the same degree in measuring the time and motions as is the shutter wheel that shuts off the light in the motion-picture machine at just the precise fraction of a second that the reel moves up one picture to the lens to take the place of the preceding one, or that the machine-gun in an aeroplane is timed so that the bullets will go between the blades of the propeller as it revolves from 1000 to 2000 times per minute.

Scientific management planned each task beforehand in the planning department office, issuing formal orders to the workers, giving minute details of every operation, much as one would adjust the automatic device on a mimeograph duplicating machine to ring a bell when a certain number of copies have been made. The aim was to so symphonize the machine and the man that the man would be as dependable and automatic as the machine. Indeed, he would be actually an assistant to a machine, whereas, in the former days a machine was a tool in the hands of a man—an assistant to him.

By determining the amount of exertion and production the worker should produce within a given time, proper scientifically measured time being allowed for rest periods to provide for fatigue, very nice and accurate computations were able to be made of just the amount of payment necessary to get the worker to exert himself.

What has been the result of the introduction of Scientific Management upon workers? They are almost unalterably opposed to it. They have become dissatisfied and less willing to cooperate. They feel that they are being experimented upon as machines, are being held to mechanical speeds. Production is being forced instead of coming as a result of good will or confidence in their job and manager. Laborers are suspicious because the scientific management claims that it will supplant skilled labor; suspi-
cious because the men who applied the time and motion studies have had very little, if any, practical experience as manual workmen; suspicious because the mechanical engineer sits in his office (so far as they know) and determines the methods, processes, and amount of energy which the workers should put into a day's work.

This is the machine theory of labor. It is not a commodity, its value determined by the law of supply and demand; but each worker is a machine, his value determined by the quantity of product turned out. Man is a mechanism whose possibilities should be studied and economized as any other scientific machine. The theory falls short in assuming that the workers' powers and capacities are fixed quantities and that a man can achieve the desired standard if only he has the will to achieve it. The situation has been attacked from the wrong end, as it were. The men have been expected to conform to the system, whereas, in dealing with human beings, the system must be designed for the primary purpose of conforming to the men.

The employer must come to realize that the entirely automatic machine never has, and never will be invented; that improvements in machinery should be considered as assistants to the power of the hand and the brain, and that industry cannot operate successfully unless hands and brains are functioning as well as machines. He must also convert himself to the fundamental realization that his factory is not primarily a collection of machines, but that he is in charge of something essentially human, for it is the men, and not the machines, that are creating, and there is practically no limit to their productive abilities.
In modern factories, mechanical friction has been reduced to a minimum. Bearings run in oil without noise, and with scarcely noticeable wear. But human friction in the same factories has not been eliminated to the same extent, and is often not recognized as even existing. The same careful thought and study has not been given to the human as to the mechanical problems. The modern factory would be considered poorly equipped if it did not have a laboratory in which experts tested the properties of materials. In an automobile factory a most exhaustive study of what steel will do under any and all circumstances is made before it is even considered for use. Why not give the same thought and consideration to the human factor? Enough attention is not given to the fact that machines and materials are used by men. "We would not think of making a casting without a profound knowledge of how the metal was going to act in the mold and afterward; but every day we make industrial molds with only the most casual attention to what is going to happen to the human being when we attempt to pour the man into them. (1)

It is true that a rapidly increasing number of employers have realized the importance of giving careful attention to proper lighting, ventilation, temperature, humidity, the elimination of dust, odors, and gases, etc., as a means of increasing production. These are all well and good, but not sufficient in themselves to promote harmony in a plant. They are the first step toward the conception of the laborer as a human being, but the employer who confines his aims in the solution of the problem of handling men to these, has not come within sight of the real conception of the laborer as he must be treated if industry expects to succeed. "We may have very bad physical conditions and yet a fine esprit de corps, or, on the other hand, a finely arranged modern shop, and a sullen, discontented population within its walls.

(1) Reference No. 3, p. 78
Highly organized systems may coexist with fine esprit de corps, but the latter is not dependent on any form or system." (2)

These ideas have been the result of the machine theory rather than the human. Employers have likewise discovered that certain delicate machines operate more efficiently in some temperatures and degrees of humidity than in others, that certain conditions are more conducive to efficient results than others, and conditions are changed to accommodate them.

The human factor in industry cannot be treated in any other manner than as a human, with any desired degree of success. He thinks, has ideals, instincts, and ambitions. These are guided by natural laws, and improvements in methods should be in conformity with these natural laws. Human efficiency is more a psychological than a mechanical result. It is the strength, skill, and willingness to cooperate on the part of the worker at the machine that determines the percent of efficiency that industry is to get out of its equipment of plant and machinery.

The worker is composed of motives and desires. He wants to create, to possess, to gain power, to have his work and merit properly recognized, to enjoy life, to protect himself and his. He wants to learn things, to vary his occupation so that his nerves will not give out. He wants an opportunity of self-expression, to feel that he is accomplishing something of importance. The employer who appeals to these instincts will win; the one who does not, will lose. Human willingness seems to be very complicated because it cannot be measured by a yardstick like a piece of cloth.

There are various combinations of interests, instincts and motives in different people, and what would appeal to one would not suit another, but the majority possess the same fundamental instincts. Of course there are

(2) Reference No. 11, p. 861
exceptions, as in the case of the person who is mentally deficient. He has no desire to know why he should carry out the orders given him. It has been found that mental defectives are ideal persons to engage to operate mechanical devices which require repetition of the same motion hundreds and thousands and tens of thousands of times. He would be no more enthusiastic about his work if every move were different, and would not do it as well, perhaps.

But our problems do not arise in handling the mental defectives. We are dealing with the rule—the overwhelming majority—not the exception.

The desire to create is fundamental in human nature. People prefer activity where something tangible is the result of their achievement. In the old shop, where the worker constructed the finished product from the raw material all by himself, he could see the results as he progressed, and took pride in his accomplishment. He had created something. But in the modern factory where he performs only one operation, which is only one of thousands, each performed by a different man, and it in itself means little or nothing to him, the situation is entirely changed. A series of jigs and fixtures have been substituted for his creative effort, and all the worker has to do is to perform tasks which require little or no skill. The only thing required of him is that he feed the material into the machine, and it does all the rest—it cannot make a mistake.

There cannot be any one panacea for stimulating creative effort under the new conditions, but unless some method is provided in each case for the expression of this desire, serious difficulties are liable to result. It may work itself out in a way destructive to the employer in "movements" that appear not to be in line with the worker's natural tendencies. "All productive force is artificially sustained which is not dependent on man's desire to do creative work." (3)

(3) Reference No. 45
The desire to possess is also fundamental. We find it manifesting itself all through life. A small boy has his collection of postage stamps, the grown man's collections vary from masterpieces of art to stocks, bonds, real estate, and other wealth. The man who never has enough property collected at any one time to fill anything larger than a suit-case or trunk will always be moving from one place to another, one job to another, not taking enough interest in any one place, community, or job to stick to it. The worker who is able to get enough ahead to own property will be a better worker, will have a sense of responsibility and participation in the life of the community and the factory in which he lives and works. Things that are "our own" are more of a pleasure to us than those belonging to others and which we merely possess and use. "Stock-sharing" bonus schemes, whatever their other values or dangers, are designed to satisfy this instinct of possession.

The desire to control has been crudely worked out in some establishments in the form of so-called "Industrial Democracy" systems. Whatever may be said either for or against them, the fact still remains that the human desire to have a hand in the control and operation of those affairs with which he is concerned, cannot be overlooked. In the modern factory, where this desire of the worker is not recognized and an expression of it not provided for, he simply goes thru a monotonous routine, doing certain work because he is told to, and without an idea of just what part he plays in the final product, or what his relative importance is. When the worker is led to believe that he is a mere cog, the desire to control is not satisfied. The most highly automatic machine is no better than a dull chisel in the carpenter's hands unless the worker feels that he is the master of the machine—that it is his tool, is subject to his control, will do as his skill directs.

Perhaps closely related to the desire to gain control or power, is the de-
sire for social approbation. A worker can put a great deal more enthusiasm into his work when he knows that the merits and quality of his work are being recognized. The employer who assumes the attitude that "The work is paid for; the workers' time is mine—why should I express any approval of what is mine?" is ignoring this desire in every human being for a desire for distinction from the common average, whether he is above the average or not.

Another desire of man is to know. True, he may not have a desire for a college degree, or even a high school diploma, but he wants to know the "why" of the things he does. The instruction cards, with all details of thinking and reasoning worked out in advance, leaving no discretion to be exercised by the worker, may be easily understood, so far as phraseology is concerned, but he instinctively asks "why is this to be done thus and so?" People do what they have to do a great deal better when they know why they do it.

Desire for association is very pronounced in the human race. I dare say that even the whites of the South, who deeply detest the negro, would have been quite as enthusiastic as Robinson Crusoe was to welcome his colored companion, if they were placed under similar circumstances, instead of preferring everlasting solitude. In the original shop, the workers were associated by a common interest in their work. In the modern factory one worker operates a machine which does the work of a dozen men or more, and the next worker is some distance from him operating another machine. His machine is his closest associate. The human comradeship which used to prevail has largely passed out under the new regime. We find clubs, shop associations, labor unions, and other fellowship organizations formed partly for the purpose of satisfying the yearning for comradeship.

The desire for just plays almost, if not the most, important part in the human relationship in industry. The worker has a right to expect fair and square treatment from his employer, and the employer, if he extends that kind
of treatment, will almost always find it reciprocated in the form of loyalty from his workers. The efficiency of men who are loyal to their employer and to each other is very much more productive than their mechanical efficiency alone, and an organizer should do everything in his power to make conditions favorable to the growth of this spirit. A worker must feel assured that he will receive a "square deal" from his employer before he will be loyal to him.

One of the very most important of desires is that of family and self-preservation and protection. From the standpoint of industry, this settles down to a desire for at least a living wage. While wages alone are by no means a solution of industrial problems, without a living wage there can be nothing but trouble. It is useless to even consider trying to smooth out the wrinkles in the relationship between employer and employee unless the living wage is enough to support life in a reasonable degree of comfort. A man cannot work to capacity when he has the worry of meeting bills, paying debts, and providing comforts for his family when his wage scale is not high enough to meet expenses.

It is useless to search for cooperation unless the wage covers the living—not merely by a week or month at a time, but throughout the year. The worker cannot exist throughout the winter on nothing, merely because he will earn a living wage next summer. Factories that operate on a purely seasonal schedule and are shut down a part of the year, are quite surprised when the workers express a desire for larger wages during the busy season. They believe that they are being taken advantage of because of the increased rush of demand for their labor. On the contrary, without realizing it, the employees are more practical economists than the employer. Even though the employer considers it no business of his how the men get thru the slack period, it is
certainly the business of the men themselves. It is very little consolation to them, when, in the middle of winter, they are out of work, to look back to the previous summer or forward to the next, when living wages will again be paid.

This is one of the circumstances leading to the problem of labor turnover. Some employers are reducing the seasonal character of their business by inducing their customers to order goods enough in advance to spread production over a longer period. They are carrying on campaigns for standardization of styles so as to be able to carry on production throughout the year. They are constantly studying methods of producing different lines of goods so that in slack periods they may be able to keep their working force profitably employed.

Managers are realizing more and more that they must conserve labor in some other way than by hiring and firing recklessly, and cause employment to cease being a gamble, so that the workers will see a future for them and will stay and make good. The efficient managers are gradually eliminating the evils of irregular employment by offering incentives which will help make the workers more contented and settled.

The awakening in this regard has largely been due to the realization of the economic waste of operating a plant to capacity for part of the year, and then letting it stand idle for the rest of the year, and that part time employment makes the workers insecure. The insecurity of employment until comparatively recently has been looked upon as a handicap to the laborer only and consequently was given little attention. The employer looked upon the clerical and advertising expenses incident to securing new operatives as the whole story on his part. When scientific investigation and study showed him that the cost of instructing new employees, increased wear and
tear on machinery and tools, reduced production while learning, increased amount of spoiled work, and more accidents because of lack of skill, amounted to several hundred dollars, and that the seasonal plant seldom gets back a very large proportion of the men it laid off the preceding season, then, for purely economical and financial reasons, the employer sat up and took notice.

A majority of industries have a more or less seasonal demand for their products, the degree varying in innumerable proportions, but few, if any, of them cannot by careful study and planning, eliminate a large amount of the anxiety of their employees by providing steady employment. One discovery made during the war was that workmen are capable of performing tasks, the capacity for which was unknown previously. War materials were made by firms whose previous product had been entirely foreign to any relation to war. The principle of standardization had led both the manufacturer and the worker to believe that they could make only one article, and that in only one way. But new demands had arisen; the skilled workers were too few in proportion to the needs, and other workers had to perform the tasks that must be done. As a result, industry realized that it had a large number of workers who were not confined to the ability to do one thing only if needed to do something else. A window-screen manufacturer overcame six-months' shut-downs by taking on a line of game boards to sell to the Christmas trade (4). Nearly all of the large manufacturers have taken on one or more side products which they "fill in" when business is slack in their regular lines.

Labor turnover is not confined to seasonal business by any means. Our industrial establishments are continuously hiring people in one department and laying them off in another. In some plants this could be reduced by having one employment manager for the entire establishment. Workpeople of average

(4) Reference No. 3, p. 144
ability can be taught to perform tasks in other departments, and, instead of firing them they can be used in some other part of the plant.

The employer's failure to work out a satisfactory solution of industrial relations problems has been due to his mistake in thinking of industry as an institution of purely material significance in a material universe, and his failure to realize that human life is more important than all other considerations. Industry exists for the sake of humanity—not humanity for the sake of industry. The workers in industry have been looked upon as a means to an end, whereas they are also the end themselves. Production is carried on in order to get something for consumption. Were it not for human consumption and desires the manager would have no outlet for his products. The production and use of material wealth can be of value only in so far as it serves to advance human well-being. This is so obvious that one wonders that it has been overlooked. The reason is, perhaps, that in the world struggle of industrial competition, those responsible for the management of industry have aimed primarily at quantity of production as a prerequisite to increased profits, and have looked upon the sacrifice of human well-being in their plants as unavoidable.

But the time is passing when success can be measured in dollars and cents, for just a "money-maker" is not attracting the highest type of executive. Very few today point with pride to the mere fact that they have accumulated enormous sums of money. Visitors to our large industrial establishments are shown the fine grounds surrounding the plant, told about the company's plan of looking after the welfare of employees, told how many customers they serve, what the output is, etc. The company may be paying large dividends, but emphasis is not laid on that fact even if it is mentioned. The company is prouder of the service being rendered to its workers and the public than of its financial success.

A reputation for "taking care of his men" has often been the wedge that has
enabled the small manufacturer to attain a position in his field superior to that of a greedy larger rival. The average man can become devoted to a worthy leader easily, but the man who can become exceedingly enthusiastic for the sake of a cause, a principle, or a firm, is rare. These are too abstract to win the affection of the average man. The soldiers of the Revolution fought for Washington rather than for freedom. Voters cheer for the candidate of their choice, and not for their party. The employee is loyal to the head of the house or his immediate foreman, and not to the abstract name of the house, except as he thinks of it as standing for or representing his idea of his leader. Not one manager is carrying on his work "for the sake of industry," although it may be true that he prefers his present occupation to any other. Industry is being conducted for the sake of the people—both those in the industry and those whose needs it satisfies—not the people for the sake of industry. The purpose of industry is to turn out products that satisfy peoples' wants—to promote their happiness. "We can never get the maximum production out of our industrial establishments when they are run—not for the benefit of the persons who do the work, nor the community as a whole, but solely for the benefit of functionless landlords and shareholders." (5)

"The successful management of the future must conceive the worker, not as a working man, but as a man working; as an individual with technical knowledge to be utilized, instincts for self-expression to be given expression, intellect to be given an opportunity for development, interest in the purposes, policies and methods of production to be regarded, ideals with respect to his and his family's future to be cherished, and power in collective action to be respected." (6)

(5) Reference No. 65, p. 152  (6) Reference No. 53, p. 137
FORCED COOPERATION

In the early history of the world it seemed that industrial organization could be achieved only with slaves. The leading nations were those who could conquer other nations and make slaves of their captives. Only two generations ago the advocates of negro slavery in our own country believed that the only permanent solution of the labor question was for capital to own labor, whether white or black. The slave driver with the most profane vocabulary and the greatest recklessness in the use of his fist and boot was supposed to be the most effective type of boss.

We need to go back only a few years to the practice of treating the worker in very much the same way as we would treat a horse. He was expected only to do the most simple routine acts, without explanatory orders. These orders might be issued in kindly tones—for even a horse appreciates kind treatment—but they usually were not. His strength was used solely as best suited the convenience of his owner, who gave no heed to whether or not the horse wanted to turn this corner or that, but called upon him whenever he pleased to do whatever he asked. It is entirely possible, of course, to be humane to horses, and there are employers who are humane and benevolent to their men. But as long as workmen could be treated like horses there was no use to develop them into human beings that would talk back. The best foreman was the one who could swear in the dialect of the gang, and knock down a man if he didn't obey orders promptly. The foreman thought that it was good discipline to fire men frequently to keep the "fear of God" in their hearts, and considered it a part of his duty to fire a man every day or so whether anybody needed to be fired or not. The employer would almost bind and gag the employ-
ee, and the employee's conception of justice was the employer done up in a straight-jacket.

We are told of a general superintendent of a large railway repair shop (1) who "mixes" his foreigners to obstruct their organization by agents of the unions. Another superintendent "balances" his nationalities so as to effect the same purpose by grouping workers in proper proportions of races antagonistic to each other.

A modern application of force in bringing about cooperation between employer and employees has its effect upon the employer thru two different sources. First, the employees, thru the Labor Union, use the strike and boycott quite freely to force the employer to "come across," and the employer retaliates with the lock-out, or the closing of his shop to the union laborers if the unions fail to do as he would have them. Capital forces wages down or locks out men whenever it sees an advantage to be gained, and labor forces up wages, or strikes, whenever it finds that Capital particularly needs its services. The methods of strike and lock-out are nothing more nor less than the mass application of Force, but the cooperation which results is not cooperation, but tolerance and endurance.

During the past few years we have had an increasing amount of legislative force in an attempt to effect harmonious relations between employers and employees, such as Minimum Wage Laws, Child Labor Legislation, Safety-device installation, Employers' Liability Laws, Industrial Relations courts have been established, Labor Boards and Arbitration Boards have been provided, and in the absence of anything more genuine, these artificial methods have all served a purpose.

However, it is easy to confuse the purpose of these laws—protection—with a policy which, under ideal circumstances, would be constructive. By

(1) Reference No. 16, p. 337.
adding a dozen brakes to an automobile there is no doubt about its being a safer vehicle and that it provides better protection for its occupants, but this is true only while descending hills. The brakes will not help it climb the hill. What industry needs is a better and more harmonious working of the motor inside, to take it over the hill which it is trying to ascend.

The traffic on a crowded street corner cannot be regulated by the city council which is performing its legislative function in the City Hall; it requires the work of somebody right on the job—the traffic policeman—who deals with each specific situation as it arises. Upon his power to control the traffic depends the orderly conduct of the corner. The problem of handling men in industry likewise requires the attention of the man on the job who handles each separate problem as it arises, on the basis of its own merits. It is a management problem, and cannot be regulated from the State house. The problem is a management problem and not a legislative one. No one who failed in business would think of demanding that a state conference be held instantly for the purpose of passing laws against business failures. Nobody has enough confidence in the law for that. Laws exist for the purpose of establishing justice, not efficiency. The best thing they can do is to keep the roads to success open. Prosperity is the result of individual effort, not governmental regulation.

There are a number of employers who, realizing this, have taken the initiative and instituted constructive legislation or policies in their individual plants. They have kept ahead of anything state legislation has done. The first great employer of this kind was Robert Owen, over a hundred years ago, (2) who reduced the hours of labor in his cotton mills

(2) Reference No. 54, p. 162
to eleven per day and made a fortune when others were working their employees fifteen or sixteen.

Today, when legislation in Wisconsin sets the limit of hours for women at fifty-four per week, a few leading employers adopt forty-nine hours as their policy and make more money, for they get and keep a higher grade of help. Individual employers, either for economic or philanthropic reasons, or both, go on ahead of legislation and set the example for others. Then the state follows them up and attempts to force others to improve conditions, raise wages, or shorten hours. It would be difficult for the state to get popular support of their laws if it were not for these pioneers, who have already shown that such a policy is practicable and profitable.

In regard to the general practice of employing Force to bring about cooperation, the World War might be pointed to as having revealed to us the hideousness of Force, and the anguish its use may bring to the World. The fundamental lessons of the War should be taken to heart as respects the problems of industry in order that the false, cruel methods which occasioned war shall not be repeated in an endless series of intermittent conflicts between Capital and Labor.

We all know that driving will not attain the same results as leading. A man can be forced to work hard if he needs the money, but that isn't cooperation. A dog will pull a cart if a piece of meat is kept always in front of his nose, but that will make him like either the cart nor the man holding the meat. succeeded in rescuing his lady by putting a piece of butter on the nose of a beetle and starting it up the wall with a piece of silk thread tied to it. But who wants to be a beetle? Cooperation in industry is a problem of dealing with men, not horses or dogs or beetles.
MONEY INCENTIVES

Without a doubt, the most perplexing problem in industry, and the one that has caused the greatest lack of harmony, and called for the greatest variety of attempts and theories for its solution is that of determining the precise share each worker should receive out of the final product. A single pair of hands does not perform all the operations in the factory, but it takes the combined efforts of a thousand. It is generally accepted that to each belongs that which he produces, but it is next to impossible to determine just what that share amounts to. It would simplify many troublesome questions if everybody could agree on just how much each person ought to get, but one worker has one idea, another's idea is different, and the employer has still another idea. And the degree of skill in the thousand individuals varies from that of the manager and superintendent, who organize and direct the workers to that of the boy who sweeps the floor. In the finished product, therefore, it is a seriously difficult matter to determine what part of it belongs to the painter who puts on the trimming, or the "hunkie" who, day after day and week after week, puts in "bolt No. 11."

Here is the root of a large number of our industrial troubles—to decide just how much each of the parties produces and ought to get.

This condition is taken advantage of by a large, but decreasing, number of employers, who, in transportation terms, set wages on the "What the traffic will bear" principle. They pay just enough to keep enough men on their waiting list to fill the jobs as men leave their employ. They consider the reduction of wages as the most important factor leading to economical production. They consider the pay-roll the most important thing. It is true that, other things being equal, the higher rate of
wages the greater the labor cost of the manufactured product. This is logical, but is based upon the false assumption that all things remain the same when a change in wages occurs. In reality, they seldom, if ever, remain unchanged. The Ford plan of paying a minimum of $5.00 a day, which was very much higher than the then existing standard rate, practically doubled the earnings of most of the employees, and proved such a great success that, instead of increasing the cost of production, it decreased it.

It is not the rate of wages that makes a difference to the profit and loss account, but the cost of labor—a very different thing. In an effort to reduce the prime costs in manufacturing, how can an employer be assured that when he reduces wages, say 10%, the employees' output will not fall off more than 10%? Is he willing to believe that they are still as enthusiastic over their work as before? as careful to prevent waste? to care for their tools, machines, etc? A reduction in the rate of wages may seem to be an easy way to reduce expense, but it rarely reduces the labor cost.

This can be best illustrated by an incident as told by former secretary of Labor Redfield (1). He recites a conversation with a master mechanic in the locomotive shops of the Imperial Railways of Japan, in which both men maintained that their native countries could manufacture locomotives at the least cost. The Japanese based his argument upon the fact that only about one-fifth as high wages were paid to laborers in their shops as in the United States. By a comparison of the cost sheets, it was discovered that for similar locomotives, the labor cost in the Japanese shops was nearly three and one-half times that in the railway shops in the United States.

(1) Reference No. 5, p. 85
By entertaining the conception of labor as an expense, employers have been thinking of wages only as money paid out, and not as services returned. Suppose that ten men, each receiving $5 a day, turned out together a product that sells for a hundred dollars. If, by doubling their wages, the same amount of product could be turned out by half the former number of employees, the employer would find himself increasing his profits because of the decreased amount of overhead expense per man. Of he can decrease the selling price of the product, thus increasing sales, and make large annual profits by speeding the turnover of his capital.

The first step in any wage consideration is to get the real value of wages. Cheap labor is not cheap. Paid cotton pickers have proved to be cheaper than slaves, altho it took a long time to convince the cotton growers of the South of the fact. In any operation in which the material costs are high, the high wage is the cheapest if it results in savings of material or in a fine quality of product. In production in which labor is more important than material, high wages are the cheapest if the wastes of human power can be cut to a minimum. Wages are high or low according to the return the employer receives, not according to the "bargain" he can make by higgling or coercing the laborer. There is a law in physics that "for every action there is an equal reaction." In business, the law might be translated thus: "For every unjust condition or contract imposed by one party to industry upon another party, there is a reaction," so that the one who profited originally by the unjust bargain loses equally by the later reaction.

No two factories have exactly the same conditions of efficiency, and no two workers are exactly equal in efficiency. Is not the "standard rate" as advocated and usually obtained by the labor unions, obviously a
fallacy? The unions declare that labor is not a commodity, then fix union rates as if labor were a commodity—just as though every worker was exactly alike, as is the case with commodities. It is an economic fact that the only base or uniform rate that can be established is that which can be paid by the least efficient manufacturer and allow him to remain in business.

Here is the cause for the rejoicing by the efficient manager. It is only the inefficient manager who wants to keep wages down, for if they go beyond his means he will be forced out of business. The efficient employer wishes for a rate so high that the inefficient manufacturer can't keep up with him.

What does a standard, or uniform, or market rate amount to, anyway? We find daily quotations in the newspapers of the prices of wheat, meat, cotton, etc., but when one wishes to buy, he finds that by paying more than the quotation he can get a better quality that will save money in the long run, because it is better suited to his exact needs. How scientifically the manufacturer has applied this principle to the purchasing of raw materials, and how unscientifically in the employment of labor. Paying more than "market" wages has a tendency to put into action that something within a man that does things for the love of doing them. It makes him think bigger and better thoughts, plan bigger things for the future, raises his standard of living. It turns what was just a job, into a position, and tends to make him like his work.

Employers have often changed the methods of wage payment from time to time in order to secure more efficiency in production, and instead of buying the employee's labor by the hour have bought the product of his
labor, hoping that by rewarding him for effort, increased output would result. This method is expected to automatically eliminate time killing, and if not abused, often results advantageously to all parties concerned. But often it results in a new kind of time killing. In changing from the time basis to the piece-rate basis the employer must offer a rate that will net the laborer as great a reward as he received by the time rate system, or there will be serious objections. Then when the change is made and output increases, the employer becomes startled by the wages he is paying to some of the men, and often yields to the temptation to cut the rate. The cutting of rates in order to limit the rise of earnings invariably leads to the retaliatory practice of restriction of output. Such cuts mean to the employe more work and less pay. He learns that cut rates are the outcome of piece-work systems, and learns to guard against them by working slowly while the piece rate is being decided upon, then continues that slow afterward to prevent a cut. The following (2) is an illustration of cutting time required to perform a set task when the rate of pay per task remained the same, which is analogous to cutting the pay in the piece rate system:

"The original piece time allowed for the work was 5 hours, this being an estimate based on the time taken when working under day work. The workers completed the job in four hours. The time was cut to four hours, and the work was done in three and a half. It was then cut to three and a half hours, and the workers completed the job in three hours. Again the time was cut, but the patience of the workers had reached its limit, and the time taken jumped to seven hours. The time was immediately increased to four hours, but with no effect. On increasing the time to the

(2) Reference No. 2, pp 27-28
original five hours, the workers completed the job in three and one-half. Once again the time was cut, with the result that the workers' suspicions were aroused, and the time promptly jumped to seven hours. The workers had learned their lesson. In this case the labor cost, which had begun at 8s. 10d., gradually sank to 6s. 5d., but jumped to 14s. when the workers had learned their lesson."

Such practices of cutting rates destroy the incentive of the capable workers, resulting in a lessening of productivity, which leads to increased cost of production, and justifies the prejudice against this method of payment on the part of labor.

If piece-work payment is to be maintained, it can only be possible when the workers are given reason to have confidence in the consequences of increased exertion and output. The employer must not be concerned about the large pay envelopes to the extent of cutting rates, for the mere fact that each laborer is receiving two-three, or even ten times the wage he formerly received has not increased the labor cost per article in the least. It is not the total wage paid, but the labor cost per unit produced that determines the cost of each article manufactured. In such a case the employer's profits will rise because the fixed overhead charges of rent, interest, insurance, depreciation, office expense, salaries of managerial staff, etc., will remain almost constant, and, being spread over a larger volume of output, these overhead charges will be less per unit of output. Then there will be the added advantage of being able to fill orders more promptly, comply with customers' desires for speedy delivery, and more rapid capital turnover.

Among the thousands of lessons which industry learned from the War,
one was that money alone will not hold men. The factories paying the highest wages had the large turnovers. A steel plant that paid high wages and large bonuses had nearly the largest turnover in the country (3). The shipyards paid well, but in the largest of them the workers came and went so rapidly that a foreman seldom knew who would work for him any day. The paying of money, and then more money, is not a solution for labor unrest. During the war, the higher the wages, the greater the unrest. In one of the great copper mining concerns of the Rocky Mountains (4) many thousands of men were on strike with a wage schedule that was well in advance of that existing in other great copper mines, in which the laborers were peacefully performing their tasks. An inquiry disclosed this difference, that one was making money wages the one and only incentive to production, while the others were utilizing others to which the workers gave more weight. There is not as much interest in "hard cash" as might be believed.

A large number of employers, realizing that they cannot interest the workers in the wages or the work itself have conceived of the idea of interesting them in the results of their work, as partners, by means of so-called "profit-sharing" schemes. It implies that the net profits of a business are to be shared on some understood basis between employer and employee, and intended to encourage the employee to greater efficiency. It is an outgrowth of the agricultural system of renting "on the share," although that was more a sharing of production than of profits. The first profit-sharing scheme that resembled the modern systems was introduced in

(3) Reference No. 3, p. 7  (4) Reference No. 20, p. 161
France in 1775, and in this country as long ago as 1794.*

There are many plans in operation in America at the present time. In some cases the company sets aside a certain proportion of the profits and pays a bonus in cash. In others the payment goes into a fund, which is held until a certain date, or which is treated as an interest-bearing deposit and the interest paid. In most cases there are provisions limiting participation until after a fixed number of years of service, and also providing for forfeiture in certain cases.

Every scheme that has been called profit-sharing is not necessarily one. Periodic distribution of lump sums, such as 10% bonus of wages at Christmas, or when stock is distributed as a gift, without relation to the net profits, are not profit-sharing, but should be called a wage dividend. There is no profit-sharing to it whatever.

Strictly speaking, a profit sharing plan would be similar in its operation to a plan which has been in operation for several years in a large optical instrument plant in Germany (5). The owner, at his death, willed the entire establishment to the workers, who are partners in the management and operation of the plant. Each worker receives a salary or wage in proportion to his ability, then at the end of the year the profits are divided per capita, each worker receiving exactly the same amount. This is real profit-sharing, and while it may work out in this one specific plant, it would be decidedly impractical for adoption by industry in general.

There is also what might be called a combined savings and profit-sharing plan, which provides for the weekly or monthly payment by the worker out of his wages into a fund, to which the employer adds an equal amount

*Albert Gallatin, later Secy. of Treas. in his glass works at New Geneva, Penn.
(5)Reference No. 3, p. 187
from the profits, the fund being turned into stock of the company, which really makes the workers stockholders. Another plan is the contribution of the employee and employer into a joint fund for building and loan purposes. The intention of these two plans is to encourage stability and thrift.

None of these plans has entirely touched the real point at issue—a change of the status of the worker in such a way as to enable him to express individuality and thus have the same sort of interest as if he were working for himself. There is no single plan that has ever been or ever will be devised that can be adopted by all industries and all establishments. A number 48 suit will present a better appearance on the man it fits than would any other suit, but the man who ordinarily wears a size 36, while he will have no difficulty getting the suit on, will hardly look his best in that same suit. Some manufacturers have heard of and investigated plants where such systems have been successfully put into operation, have inaugurated the same system in their plants and regretted it the rest of their lives. The solution of the labor problem is deeper than can be found in any of the theories of profit sharing. This sounds rather pessimistic in view of the fact that a large number of American firms have announced successes in profit sharing. But those that have been less successful remain unannounced.

The Willys-Overland Company has worked out a profit-sharing plan in which, after the permanent capital* has received 7½% as interest (which is economically sound, since labor is also guaranteed a minimum wage return) and after charging off 3% for depreciation and 1% for a "rainy day" fund, the balance is divided fifty-fifty between the company and those employees.

*They have defined capital for their use as the book value of the assets of the company, not including goodwill, patents, trademarks, etc.
who have been working for the company for at least six months. This plan seems absolutely fair, yet, inside of a week before the profits were to be divided on July 1, 1919, there was a threatened strike in a demand for from 15% to 40% increase in wages, and that piece work be abolished. The strike was averted, however, and profits were divided. Shortly after the distribution was made 8,300 employees quit at the Toledo plant, demanding a reduction of hours from 48 to 45 hours per week.

The principle of profit-sharing plans looks splendid, but it is handicapped by a number of disadvantages that the advantages cannot fully overcome. It is conceived of as making it possible for the employer and employee to work together on the job and share the fruits of their work. Thus far it may be true—but by making it possible it does not bring it about. Profit-sharing does not adjust the relation between employer and employee—it only obscures it by trying to presuppose a relation that does not exist. If the schemes are examined carefully it will be found that there is very little, if any co-partnership existing as the result of them. The workers who contribute their labor are never on a plane with the stockholders who put in their money.

In the first place, the basic wage must be sufficiently large to avoid the workers getting the idea that profit sharing takes the place of part of their wages. Wages should be adjusted before profit sharing can expect to attain any degree of success. Even with this precaution taken, the men, with rare exceptions, see wages as payment for services sold—not invested. They look upon shared profits too often as nothing more than belated wages, arguing that if the management can afford to pay profits at a later time it can do so only because it has withheld a part of their
wages previously. They prefer to receive their wages from week to week instead of letting the management have use of their money for its own advantage, as they see it.

A most striking example of the workers' attitude of "gimme mine now" is found in the experience of the Fort Wayne (Indiana) Knitting Mills, which John R. Commons (6) placed at the very top of his list of firms whose employees had "Faith in Management" in August 1919. The organized workers were sincerely interested in efficient production. They were confident of the good faith of the management, were always able to present their case to the company officials and to receive satisfaction. The company kept their employees at work during periods of shortage and continued to manufacture, taking the risk of piling up large stocks. Not an employee had lost a single day on account of lack of work, due to the large surplus which the company accumulated to take them over periods of depression. The employees had made many contributions toward greater economies; their jobs required real workmanship. They were glad to be treated like men. There was welfare work, educational facilities, a club house, community center, and several harmonizing agencies.

A chapter a year later would tell a different story. In June, 1920, profit-sharing checks for 25% of wages, out of the preceding year's earnings, were issued to the workers. The future looked bright for all, and the workers asked for--demanded--that the 25% profit-sharing bonus should be put thereafter into the weekly pay envelope instead of paying it at the end of the year. To the workers, profit-sharing was nothing more nor less than deferred wages. The manager pled, begged and implored the work-

(6) Reference No. 16, p. 135
ers to agree to a continuation of the plan already in effect, but it was of no use. So for a period of six months, unearned profits were paid as current wages, even though wages themselves had always kept up with the cost of living. Shortly after came the fall in prices. When the sales fell off and inventory depreciated 40%, the manager made an attempt to get the workers to agree to the old plan of paying profits only when earned, at the end of the year. He wrote a long statement imploring them to accept his statements and to have confidence in his judgment and integrity. But the workers could not understand it that way. Wages are paid now, while profits do not come until a year from now. They require different kinds of imagination. Again his attempts were futile, and at the expiration of the six months agreement 1,900 employees walked out, and the whole plant was shut down.

An attitude on the part of either employer, employees or both that is often assumed is that profit-sharing, is a gift—a benevolence—on the part of the employer as a means of reconciling the recipients with otherwise unsatisfactory conditions, or with the denial of rights and privileges shared by Labor elsewhere, rather than a part of earnings to which they are justly entitled.

Another difficulty is the lack of understanding and adjustment of the workers to the uncertainty of profit-sharing—uncertainty as to whether or not there ought to be profits, uncertainty as to what the profits actually are, uncertainty on the part of the workers as to whether the employer is revealing the true profits. During periods of depression when the amount of profit distributed is less, there is a great deal of dissatisfaction on the part of the employees because they are working
just as hard, or even harder, and the unfavorable conditions are not
due to anything brought about by them. The expectations of the labor-
ers are constant; they fix their standards of living in accordance with
the high rate, making no provision for a lower rate. As long as the
rate keeps up they are content to take the money, but are bound to be
dissatisfied when the rate goes down.

This is where the agitator gets in his work. Because the employees
do not understand why or how the profits are made, or why or how the
losses are incurred, they are ready to believe that they are the victim
of some game, that the management is holding back some of the profits,
mismanaging, and cheating. They fail to realize that the firm is going
thru a trying period, and if they do, are likely to attribute it to lack
of efficient management. The hopes that they have built are destroyed,
and their confidence in the management is gone.

In a real profit sharing system the rate of distribution would, of
course, fluctuate with the earnings, and in order to adjust labor troubl-
es by means of such systems, the management would, therefore have to be
assured of a profit. Only 20% of commercial adventures show a profit,
and the firm that undertakes to install a plan in which they must guaran-
tee a profit is entering nothing short of a gamble. Mr. J. W. Sullivan,
of the International Typographical Union, says "I have yet to discover
any profit-sharing plan that did not fail when the profits ceased to ex-
ist, or even when they diminished.

The payment of any reward that is not directly connected with the
work done is somewhat of a mystery to the average worker. He does not
understand why a drop in the market price of raw material may compel his
firm to sell at a price lower than cost. He fails to see any causal relation between variations of his efforts and fluctuations in his share of the profits, since he has continued to do his work just as well. He does not readily consent to a decrease in his reward because of some outside happening. He attributes the "price situation"—if he attempts to bring it into the situation at all—to financial manipulation, and, of course, believes his employer to have his part in the "ring."

The payment of profit-shares in stock in the company has advantages to the company in securing the employees' sense of ownership, but the ownership of one share of stock in a million dollar corporation can hardly have any marked effect upon its efficiency. The average workman can not buy enough stock to make the dividends an important part of the year's income, and if it were large enough to provide him an income it is doubtful whether he would remain a worker very long. Workers, as such, are rarely represented on the Boards of Directors which determine whether dividends shall be declared or not. There is danger to the employee in the ownership of stock because of the estimated 95% of all business enterprises that fail. There are a few corporations in which the stock is comparatively safe, and the employee who has invested (thru profit-sharing) in stock can usually ill afford to lose what he has put into it.

The worker should be paid for his contribution to the sum total of production, not a share of the earnings of capital. His reward should not fluctuate according to the dictate of any force outside of himself. That is, he should be paid for what he does, and not for what conditions may do for him. If a man is paid for the quantity and quality of his production, or for the amount that he saves in production, he knows the reason for the
amount of money received, and he knows that it is up to him to make more. He gets the reward so nearly coincident with the work that there is no loss of connection between the two. Few men can associate their work in February with a payment they expect to receive the following July or January. There is no incentive to labor hard today for some reward that cannot be seen for six months or a year, and the amount of which is not known, and will not be known until then.

The money that is "given" to employees under the pretense of "profit-sharing" could be used to better advantage in improving the plant and conditions so that the employees and employer could earn more. Progress comes as the result of better methods, and not as the result of dividing up the daily profits as they are made.

Neither the employer nor the employees can attain the goals they desire as long as the goal is the nearest dollar. What are wages, anyway? They are not the money received, but the things that can be purchased with that money. Wages are the return for effort, and may be stated in terms of power to possess things which are desired to preserve human life and happiness. In this meaning, the wage of the president of the United States is enormously greater than his salary. He has a feeling of pride and dignity in his distinguished service, which is of far greater weight to him than the money salary he receives.

In the same way, the contents of the pay envelope which a mechanic in a Detroit automobile factory carries home with him on Saturday night may be only a part of his wage. The opportunity of expressing his skill in his trade, the desirable character of his companions in the factory, the feeling that he always gets just treatment by his employer, and other con-
siderations, may constitute the remainder of his wage. The manager has not caught the tone of modern industry who loses sight of the fact that other things than money are involved in any bargain between him and the men.
WELFARE WORK

A great many employers, with the aid of scientists and psychologists, have been and are trying all manner of ingenious methods of interesting the workers in their work, such as efforts to appear interested in the well being of the worker by building sanitary dwellings, the establishment of insurance funds, maintenance of health departments with a corps of doctors and nurses, first aid stations and hospitals, gymnasiums, shower baths, athletic fields, savings banks, library and reading room facilities, lunch rooms, gardens, sanitary conditions, accident prevention devices, provision for insurance funds, old-age pensions, etc.

The first record available for so-called "welfare work" is the system or methods of Robert Owen, who in 1800 assumed the management of New Lanark, a cotton mill employing 1800 or 2000 persons including about 500 children, a "collection of the most ignorant and destitute from all parts of Scotland, possessing the usual characteristics of poverty and ignorance."

(1) In 1812 he wrote that the same population "had now become conspicuously honest, industrious, sober and orderly, and that a drunkard or a thief is scarcely to be seen from one year to the next."

Owen's policy was paternalistic and inquisitorial. He regulated every phase of his employees' mode of life. He first enlarged and repaired the houses of the town, and a rule was made requiring every tenant to clean house once a week and whitewash his home once a year. Owen provided a village water system, cleaned the streets and provided police protection. A company store was established, a school, gardens were provided for each employee, a hospital for the sick and aged, and a savings bank for employees' deposits. Working hours were reduced from fourteen to twelve per day, with

(1) Reference No. 31, p. 59
and hour and a quarter off for meals. No child under ten years of age was employed.

From the very first his welfare work paid financially, netting him about 10,000 pounds a year from 1800 to 1830, including the payment of wages for the entire year of 1807 when the factory was shut down. This was an average of $7\frac{1}{2}$ return on his investment of 130,000 pounds.

The theory of "Welfare work" is that where the workers are properly looked after, even at great expense, there will be better health, output will be greater because of less fatigue, labor turnover will be reduced because conditions are such that the workers will not want to leave. It is an attempt to develop a social structure based, not upon what the worker is entitled to in proportion to his output, as in the wage system, but upon surrounding him with the comforts of life and make him contented. It is based upon the same principle upon which the well known manufacturers of condensed milk maintain that the excellence of their product is due to the fact that it comes "from contented cows." Surrounding people with good influences received a great boost during the war, for the soldiers were victims who could not get away from the "Welfare workers." The theory was that "The people must be taught to play—not be continually so serious that they get no enjoyment out of life." But frequently they learned more about play than about work.

Welfare work, in its attempt to secure and hold the workers' interest and thus his co-operation, has not accomplished the results hoped for in every case. The modern workman resents the thought of his insurance funds being in the hands of his employer; and dislikes the idea of living in houses owned by the corporation for which he works, even though
they be built well and rent at a fair rate. There is a feeling of de-
pendence, which often gives rise to misunderstandings. Welfare work
has been confused with "uplift" work, "Betterment work," etc., and work-
ers bitterly resent being "uplifted," however much they may need it. The
"taking an interest" kind of welfare work that insinuates, whether in-
tentional or not, that the laborer has fallen and therefore should be
"uplifted" is productive of more harm than good. Of course a really
paternal employer can probably win out over one who cares nothing about
his men's welfare, but paternalism has about reached its limit with the
American workman. It costs more for the same degree of cooperation than
a method which secures the worker's lively interest in the work for its
own sake. A paternalistic government in which the citizens would have
many privileges but no rights or responsibilities would develop beggars
rather than patriots. In industry an employee should be able to feel
not only that his rights are protected, but that he has a certain respons-
bility for the success of the firm. A worker does not appreciate having
his affairs looked after by someone else for him, for that is a sacrifice
of his independence, and that is harmful, no matter how good the employ-
er's intentions.

There should be no confusing of benevolence, philanthropy, charity,
or paternalism with business. They really need not be confused. If we
consider medical inspection, safe and sanitary conditions, etc. simply
as good business, then they are welcomed by the men. Those employers who
have imagined that they can win the worker by so-called "welfare work"
and service, administered from above, are laboring under a misguided de-
lusion. They are living in a fool's paradise. The manager who defines
his labor problems in terms of welfare work has not grasped the real significance of the problem. The real problem of labor management is to realize as fully as possible the practical expectation of production by reconciling the human element to it. The impersonal compulsion of scientific management cannot accomplish this. Something more substantial than the glad hand and congenial smile are necessary.

When the size of the organization makes personal contact between employer and employee impossible, or when conditions remove the employer to a distance, the task of maintaining the personal touch is frequently intrusted to a "welfare worker," or "labor manager," "service man," or "Employment representative." His chief duty is to look after the relation that has been lost thru the growth in the size of the industry. The workers usually object to such a "welfare supervisor" being thrust upon them, no matter how sincere he may be, for they think his goodness will not last. They wonder what the game is. The welfare supervisor, being a salaried officer of the employer, has to overcome the natural suspicion on the part of the worker, that he will interfere with the freedom of their private lives and diminish their independence and self-reliance, or act as a spy to inform the employer of the happenings in the plant.

Welfare workers often interfere outside of factory hours, in matters of home life, methods of spending leisure time, etc. These welfare workers are seldom fully trusted by the workers because it is believed that they cannot serve two masters and satisfy both. There have been numbers of cases where such workers who were sincerely interested in the welfare of the workers have made an effort to get girls transferred from heavy machines, protested against rate cuts, or in some other way attempted to
interfere for the benefit of the workers, and have lost their jobs be-
cause they are not expected to use their influence in that direction.
Workers are seldom deceived by make-believe industrial relation schemes.
They respect the manager who is honest and sincere, even tho he may be
badly mistaken, but they regard insincerity with contempt.
EMPLOYEES' REPRESENTATION

The wage stimulus of scientific management, as has already been indicated, furnishes only a part of the possible motivations, interests and stimuli which must be applied to secure the wholehearted response of the workers. The appeal to produce and to take responsibility have never reached the consciousness of working men for the reason that it is impossible to feel responsible where there is no chance of bearing the responsibility.

On the average, labor is 80% of the cost of manufactured goods, yet employers spend most of their money, time and effort on machinery and materials, and leave human relationships to the blundering rule of thumb. Scientific management proposes to confine the brains of industry to the planning room, and wants workers to follow instructions without question, thereby transferring the responsibility for production from the ones who produce to the ones who direct production. Had Scientific Management concerned itself more with the human than the mechanical factor, and worked toward efficiency by giving the workers a sense of economic participation, there might not be nearly the amount of antagonism between the workers and the employers that exists today.

Even when employers do come to the realization of the existence of the human relationship they often attempt the solution of its mystery by beginning at the wrong end first. They go into their offices, close the door, dream and struggle over an inspiration, and finally emerge with a cut and dried scheme of bonuses, profit-sharing, etc. The employee notices that the employer has suddenly had a spell of good intentions and eagerly takes the rake-off and forgets everything else. His efficiency is not changed in the least by the new system.
An employee's efficiency is determined largely by his interest, and that interest is secured by allowing him a certain amount of self-determination in his work—a chance to see and recognize his significance in the industrial organization of which he is a part. Employee representation has been devised to contribute to this end, and has been reasonably successful in attaining its purpose. If industry is to advance, there must be continuous cooperation between all parties in the application of peace and work. The attainment of such cooperation is fundamentally a matter of attitude and spirit. Mutual trust and belief in the common interests must supersede the distrust which accompanies the suspicions concerning opposed interests.

A common venture in industry means that both parties to industry have invested some part of either their life or fortune. Investment in industry necessarily leads to a right to share, not only in the returns, but in the control. One investment is material substance and the other a human investment, and of the two, the one involving life is the more precious.

The intention of the incentives mentioned in the two preceding chapters has been to get away from the idea that the worker is a cog in a machine, to remember that he is a human being. This is recognized when the worker's health and happiness is provided for, and when he is taken into partial partnership by being given a share in the profits. The purpose of these incentives is to make him interested in the plant, to make him feel he is a vital factor in its success. They will accomplish the results hoped for up to a certain point, but in order to get the full measure of the worker's latent powers they must not stop here. He must
be taken into confidence when matters pertaining to his welfare come up, and given a chance to express himself on subjects that are close to his interests. All paternalistic movements, as such, are deadening in effect. Reforms that come from the top down may be inspired by good motives, and their immediate results may tend to create a state of contentment, but the indirect results usually offset them. Even an improvement increasing the men's comfort may be resented unless the men are asked to consider the proposal and their consent secured.

Centuries ago nobody knew of any method of government other than by an absolute monarch. It was gradually discovered that even a crowned and anointed kind with the "divine right" did not produce the most efficient government. People can be led faster and farther than they can be driven, and gradually Constitutions have been formed which have given the people an opportunity to discuss, thru representatives, what shall be the rules of procedure by which they shall be guided. There were skeptics, of course, who doubted whether such a government could stand, but it turned out to be better, stronger, and more efficient than the old kind of government, and there was much more obedience to the rules. When people have a part in the laying down of the rules and laws they are much more ready to comply with them than when issued from one individual.

A failure to recognize the "subject's" wishes and desires usually proves disastrous. "An employer (1) some time ago suddenly put up a notice in the works stating that, from and after the following Monday, the factory dinner interval would begin at 1 P. M. instead of at noon. The men instantly revolted, and insisted upon leaving work at noon as

they had been accustomed to doing. The result was a stoppage lasting several days, and a considerable pecuniary loss to the firm." Whether the change would have been good or bad, such an order which affected their own habits, the arrangements at home, the convenience of their wives, could not hope but have the effect which actually did result. No wonder the men resented the order.

Of course there must be organization, authority, and discipline, in any factory where several men are performing different duties, and their work must conform to a common plan, but this does not justify any lack of consideration for the desires of the men to lay down any rule or decision of great importance to the men, and effecting their personal desires, without having first explained it to them and inviting their opinion on it. Thru no fault of his, the modern shop organization does not permit of the worker's expression or development of individuality.

The eventual result of joint control of industry would tend toward wiping out the conception of the employer as master and the laborer as servant, and to establish an equality of opportunity. Joint control, or employee representation, allows the men to have a voice in the affairs of management, to become familiar with the things that enter into the production of the plant, and allows them to present their own demands and needs to the management on an equal basis. If the demands do not come within the limits of the powers of management, the latter has an opportunity to explain why they cannot be met, instead of a cold turning down of propositions without any reason being even suggested to the workers except the one that they arrive at themselves—that the management is too hard-hearted and "hard-boiled" to give any attention to their desires.
The time for mandates and arbitrary judgments is past. They only serve to bring out the ire in those against whom they are issued and antagonize a feeling of hatred and injustice on the part of the employees.

Employee Representation means that employers realize the need of the employees assuming greater responsibility toward efficiency and success in the industry in which they are engaged, and that greater participation in the settling of those matters which vitally concern them should be granted to the workers in order to develop that sense of responsibility. Employee Representation designates negotiations between management and men, where both meet face to face and negotiate knowingly, basing their transactions on frank and fair dealings.

From the point of view of organization, employee representation systems may be divided into three types (2) as follows:

1. Joint action of management and employees by means of councils, committees, conferences, assemblies, etc.

2. Employees' associations, sometimes called "cooperative associations," or "brotherhoods," in which all employees are usually included.

3. The so-called "Federal plan," with an organization in each factory analogous to that of our Federal government—with a cabinet of executives, a senate of foremen, and a house of representatives, composed of department delegates.

While there are comparatively few industries that have established employee representation, the first type mentioned above has been adopted in a large number than any other. It is the simplest, altho the second plan closely approaches it in that respect. Perhaps the most conspicuous

(2) Reference No. 63, p. 407.
example of the employees' "association" plan is to be found in the Filene Department Store in Boston. Every employee of the company automatically belongs to the association, which gives him a voice in the government of the store. The Filene Cooperative Association (F. C. A.) maintains classes in culture and business, manages all the "welfare work," a savings bank with a loan department, a health and accident insurance plan, a cooperative store, a lunch room, a clinic, a choral club, a musical comedy twice a year, an athletic department, and a newspaper. The employees elect a board called the Council, which passes upon all questions of wages, discipline, working conditions, and discharge, should the employee feel that he is not being fairly treated. Every member of this board is an employee and its decision is final. A prominent judge once reviewed a number of their decisions, and stated that they were as fair as those handed down by the average court. The Council has occasionally overruled a decision of the management that has been appealed to it, and the management in every case has later admitted that it had made a mistake and that the Council was right.

The White Motor Company, of Cleveland, Ohio, has a shop committee composed of one representative elected by each group of ten employees in the plant, to be a part of a giant shop committee, which meets with the management to talk over any part of the whole industrial problem confronting them.

The Printz-Biederman Co., of the same city, has organized its workshop committee system on the "Federal plan," and has been fairly successful. The plan, being somewhat complicated, is slightly handicapped, however. When the workers strike a snag in presenting a defending explanation to the union agitators who try to organize the works, the organizer "kidds" him about it and asks him if he wouldn't like to belong to a system he could understand.
However, the company claims that the union has won very few sympathizers away from their system.

There is no one system that can meet all needs. There are great differences in industries. Some are simple of operation and others are highly technical. The character of the industry is a factor determining the extent and rapidity with which employees can be initiated into control. The rapidity with which employees can be given control depends upon the capacity of the employees, the intricacies of the business on both its technical and financial sides, and the legally fixed obligations and responsibilities of the company.

The various plans of employee representation classified according to their purposes, would fall into two other general groups. In some industries the employers have given the workmen a voice and a vote in industry. This, in some cases, has been the result of foresight and a study of the situation, while in others it was forced upon them by their employees organizing into unions. When there is a disagreement, the decision is made, not by the directors or the president, but by a joint committee, or a committee composed entirely of employees.

The other group, which includes most of the committees in existence today, are those in which the management has decided to give the workers a voice, but not a vote in industry. The workers can discuss things, bring their grievances before the management so that the management will be thoroughly informed as to the workmen's reaction to its policies, but it is still felt that the management knows better what to do for the industry than the wage earners. They have a voice, but not a vote. The only vote they have is in the election of representatives. Elaborate machinery is provided, such as secret ballots for election of representatives, and all sorts of arrangements giving the form of democracy, but no voice in deter-
mining wages, hours, or other conditions of employment.

Who is the most interested in the success of the industry, the man who is dependent upon it for the permanency of his position and the possibility it offers for advancement, or the person whose only interest is the amount of dividends that can be secured on his investment? Is it reasonable to suppose that a committee composed of workers from every department of the plant will know less about the conditions as they are and as they ought to be than the man who sits in the office and manages? The workers cannot theoretically be expected to adjust the working conditions any more reasonably without knowing whether business conditions will justify the change than the managers can adjust them without knowing what working conditions are desirable. Thru the representatives of the workmen the managers secure the workers' viewpoint. The man naturally choose as their representatives, those who can best express and interpret their demands. In most cases, those are the very men who would be the leaders in destructive movements under unfavorable conditions in the factory. Committees acquaint both sides with the facts, with the problems which confront the other side, and with the point of view and intentions of the other side. In an address by Mr. McCormick (3) he cites a case in one of the plants of the International Harvester Company where a demand for a general wage increase was voluntarily withdrawn as soon as the management showed the books—"The ledgers which before had been regarded as sacred"—and the workers saw the management's problem in the existing financial conditions. The biggest thing that grows out of such a committee, perhaps, is the closer understanding and cooperation between the men and the management. It makes for free interchange

(3) Reference No. 47
of constructive ideas. Not until both sides recognize and appreciate each other's rights and demands will we get anything like the efficiency of which industry is capable.

Such subjects as the cleanliness, ventilation, lighting and temperature of the factory, the number of working hours, the intervals for meals, welfare plans, holidays, accommodations for meals, accident prevention, benevolent funds, workshop rules, arrangements about fines, deductions for inferior work, breakage of machinery and tools, charges for hot water and other services, infringements of shop rules or agreements as to wages or hours, and many other subjects, might all be considered advantageously by a representative committee and brought to the notice of the management.

In the matter of disciplining workers for misbehavior, altering time cards, and for unfair practices in general, shop committees, whose duty it is to look after such affairs, have usually been exceedingly fair in their settlement, where the method is used. At any rate, there is very little truth to the argument that they would be less fair, in principle, than the management. It seems rather ridiculous that the management should be accuser, judge, jury, and executioner all at the same time.

When the workers are represented and function with the management on such matters, especially when complications of production methods, costs, expenses, etc., arise, the workers will discover that there are hundreds of problems involved in manufacturing of which they were not aware and with which they are not competent to deal. Therefore representative committees should not be administrative bodies. There is a tendency to turn over certain administrative matters to committees, but such committees are apt to indulge in more talk than action. There is a danger of employ-
ers expecting shop committees to be responsible for the correction of short-comings which the management is responsible for. Some employers look upon the shop committee as a "solution of the labor problem" which will save them from the exertion of hard work in competent management.

Employers are apt to think of the participation of workers in the control of industry as taking something away from them, simply because they are used to thinking that the business is theirs to do with it as they please. It is the nature of privileges, when cut off, to die hard, and the privilege that the employer has had of monopolizing industrial control may die as hard as the abolition of the exclusive rights of ancient dynasties. The laws of inertia are constantly operating. If we wish to stop a large fly-wheel which is running at top speed, the motive power is first shut off and then the brakes or some other form of resistance applied carefully and gradually. To stop the motion instantaneously is impossible. A swiftly moving train cannot be stopped instantly, and it is equally impossible to get the same train from a standstill to full speed. In industry there is evidence of inertia when an attempt is made to change from the "divine right" system to the "employe representation" method of control. The workers also exhibit a reaction against such a change at first, when it is instigated at the suggestion of the employer. The purpose is not understood, and they are suspicious. Employers who have had employe representation forced upon them have confessed that they have found it successful. They had resented interference with their unlimited authority, and had to change their plans against their wills. But they learned that it was worth while to be protected against themselves, that they needed to make it impossible to violate or overlook the rights of their employees.
Employee representation systems should not be introduced all of a sudden. It is better to go at it a step at a time, for drastic changes are upsetting. It is well to start with a single committee to adjust some particular trouble, and gradually enlarge its powers until the occasion arises for another committee for some other purpose. The entire Filene plan grew out of a dispute with a girl cashier over a shortage. She stated that she was innocent, and that any fair-minded person would agree with her. The manager selected an outsider to decide the case, and he sustained the girl. From that incident grew the whole of the plan in force today.

How and when to start a representative plan depends entirely upon circumstances. If it is left until other methods of settling differences are in force, the result may not be as expected. If a labor union is conducting a campaign to organize the works, then the suggestion of an employees' representative committee would be considered by the union as a challenge to them to test their strength. This would be a treacherous time to make an effort to begin a shop committee plan independent of the union. The time for the managers to start such a system is when all is peaceful and no organizers are about. The employer must keep ahead of the unions.

Having established a representative system, the management should be prepared to stick to it, whether or no. A certain shop committee system failed entirely because the management varied from the set procedure in an effort to do more than was necessary to satisfy the employees. There was a general sentiment for a revision of wage rates, and the shop committee began investigations which included data concerning changed cost of

(4) Reference No. 16, p. 113.
living. As the result a new schedule of wages was prepared, and in the meantime the "Industrial Representative," who was the welfare worker employed by the management, conducted an investigation on the side, and also prepared a new schedule of wages which the company would be willing to accept. The committee meeting was held, the Industrial Representative waited until the committee had presented its demands, then he presented the schedule which he had prepared, and which contained rates much in advance of what the committee had demanded. The committee was perplexed, and when they recovered they voted to accept the company's proposition.

The result was that the committee was discredited by the workers. They lost faith in it. They believed that they were not receiving as much thru their committee as they were entitled to; that they were not getting the consideration that they could get if they didn't have a committee at all. They believed they would be better off without the committee because the committee had more consideration for the firm than for the workers whom they were supposed to represent. The unionists pointed to the outcome as proof that "the company knew it was whipped, and was falling over itself to make any kind of peace it could provided union recognition were excluded.

It cannot be stated with even approximate accuracy that shop committees are a solution of the cooperation problem. It may be very true that a large number of firms have found the system successful and are loud in its praise, but it is not a cure-all. As stated above, the feasibility of the plan depends entirely upon the circumstances in the particular plant in question. One thing is certain— it cannot take the place of an adequate wage. Capitalists are willing to forego a small portion of the
guaranteed income in exchange for a partial control of the enterprise in which their capital is invested, but the case of the laborer is hardly the same. He must be guaranteed a living wage as a prerequisite, then control will serve as an additional incentive. Labor, as a class, is vastly more concerned in immediate wages and security of employment, and desires only power enough to command respect. They think they want responsibility in a greater degree than they really do when they get it.

The history of labor organization shows that Labor cannot manage industry and remain Labor. Producers' cooperation has almost always failed, altho consumers' cooperations have met with moderate success. Laborers always lose out on producers' cooperation whether it succeeds or fails. If the undertaking fails, labor loses, of course. If it succeeds, the members know a good thing too well to let in anybody else and the doors are closed to new members. If more laborers are needed to carry on the work they are hired on the market just like capitalists do, and gradually the cooperators go over to the employer's side of the business. Labor, as a class, when in control of industry, fails in planning for the future, and on finding leaders who are willing to shoulder responsibility. But if it succeeds it is because certain individuals succeed, and then those individuals leave Labor, as a class, and Labor remains where it was.

It was pointed out in the chapter on Money Incentives that profit-sharing's failure was largely due to the inability of the laborers as a class to see further than present wages, and hence their inability to share in the management's present responsibility for future profit and loss. The same also is true in the Employee Representation plans, altho not to nearly so great an extent, because there is not the financial responsibility that there is in the profit-sharing plans.
DIRECT STIMULATION OF INTEREST

One of the really great problems confronting industry today is the creation of interest on the part of the worker in the work he is doing. Fair wages, reasonable working hours, healthful, sanitary and comfortable conditions, ordinary precautions against accidents, are all regarded as primary requirements now; but, in themselves, do not create interest in work and loyalty toward the management. How can the worker be induced to fit himself into the scheme of scientific production, to appear at work on time every day and work steadily for the entire day, maintain standard quality of output, and at the same time be happy, loyal, and willing to remain in his present job even when other employers try to attract him to their company?

The narrow-viewing manager has had the idea that the only interesting thing to the worker was the amount of compensation he could get, and, by experimenting, he measured the exact amount of bonus, premium, or other financial incentive necessary to get the worker to do his best. This has served for a while, and for some employees more than others. But when the novelty wears off of the job, the conditions are the same as before. Interest and initiative cannot be bought, bribed or coaxed out of the workers. Efficiency is not present unless there is voluntary consent on the part of the employees. Financial returns alone have failed to stimulate productivity, and the constant demand for shorter hours, together with the high rate of labor turnover, is evidence that the work in a great many industries not only unattractive, but is actually repelling.

Money, as the universal common denominator, must be replaced with other incentives, in which the dollar sign is not so pronounced. This does not mean that the wage is not to be considered important, but that
something else must supplement the wage incentive. It assumes that the wage "problem" is no longer a problem or question. No amount of money will keep active-minded men on monotonous jobs for any length of time if they can get a job elsewhere—and it is active-minded men who are needed. A psychologist relates an experiment in which he offered a very attractive wage to anybody who would perform the task of pounding a log with a hammer for eight hours a day, while comfortably seated in a chair. As a man was employed he was assured that he could have the job as long as he desired it, but two days was the longest time any man worked, and this man was one who was in desperate need of money, for he had a family and had not had work for several days.

An office manager (1) who wished to employ ten office men, inserted the following want ad. in six consecutive issues of a daily paper:

WANTED Unusual typists for an unusual job. Must be able to think well and type well. This is not routine work. You will handle important, confidential and interesting material, and have considerable individual responsibility. Address D-4

Of the ten who were chosen from the two hundred applicants, all said that they applied because it offered work, and most of them left jobs that were paying a great deal more than they would get in their new positions.

The employer himself has no difficulty in holding himself to his task, for he has the satisfaction of seeing the results of his labor. The game of Industry is, in fact, perhaps the most interesting game ever invented—for the employer. The working man has the same desire to feel that he is accounting for something, and he must find expression for it in some way. Interest in his work makes it an inspiration to the worker to do better things, and a lack of interest makes it a drudgery. Where work is monotonous, and nothing is done to offset it, the worker feels that he has nothing

(1) Reference No. 49, p. 812
ahead, and is sure to do poor and slow work.

In the old-fashioned methods of working, the worker's duties included a trip to the blacksmith shop, the emery-wheel, the stock-room, etc., which gave his mind and muscles a restful change. The worker created the product from first to last. But in the modern industry, with its specialization, the workman is no longer a creator. The tendency is more and more toward making him simply an attachment to a machine, and away from creative. However, specialization and division of labor has come, and come to stay, and a return to the old methods is not advocated. The fault lies not in the specialization, but in the mechanical application of it to the utter disregard of the human element that is not mechanical. There is no doubt but that Scientific Management is more efficient in principle than haphazard, unplanned, unorganized production, but, like most other things, the law of diminishing returns applies to its use. A case will illustrate this point. In a certain factory (2) the men, who were paid on the piece-rate basis, had to cross the room in which they were working to get a supply of bolts, nuts, etc., which they used in the process in which they were engaged. This required, on the average, about two minutes every half-hour, so, in an attempt to eliminate this waste, a "stock-chaser" was employed by the employer to keep the workers supplied with these bolts and nuts, so that they could use all of their time in assembling. Almost immediately the production fell off about 20%, because the men would go to the washroom and smoke and gossip in order to be relieved of the monotony. And because they went for the specific purpose of seeking a change, they would remain away from their work for a longer time.

(2) Reference No. 50, p. 800
than they had previously done when merely walking across the room for supplies and incidentally getting a change.

A person can and will, with a great deal more freedom and ease, do much more work when his work is interesting than when it is monotonous repetition. Interest is easily obtained when the work gives the worker a certain amount of discretion, of self-choice, a pleasure in its continuance, a sense that what he is doing is of real importance, and that he has the approval of someone for what he is doing.

Interested attention is essential to the higher type of mental processes. When work becomes monotonous, growth and development have ceased, and the work is so automatic that no new demands for active attention are necessary. The incident of the telegraphers at Nashville, Tenn., illustrate this. They received the news of the assassination of President Lincoln, sent the message to the local newspaper, and their first intimation of the assassination was the cry of a newsboy on the street announcing the death of the President. The receipt of the message by the telegraphers had been so mechanical that it meant nothing to them.

fatigue in

Pleasure in work decreases tired muscles and brains. Dislike for work saps the strength of the worker. In a football game it is frequently not the team with the greatest strength that wins the victory, but the one with the more grit and perseverance. The players are often fighting with all their strength right up to the blowing of the whistle, and then are unable to walk and have to be carried from the field. Even tho the winning team has worked the harder and received more injuries than the losing team, often they leave the field with more strength than the losers, and will report the next day refreshed and ready for a work-out, while the losing team
may require several days to overcome the shock of defeat.

Muscular strength is frequently measured by finding the maximum grip on a recording instrument. The amount of the grip varies from time to time and is affected by various conditions. One of the phenomena which has been thoroughly investigated is the effect of pleasure and of pain upon the intensity of the grip. It is well established that "pleasure increases the grip or the available amount of energy, while displeasure reduces the strength." (3) Work we enjoy doing is less exhausting and fatiguing than what we dislike to do. A man may walk twice or three times as far while hunting as he would if walking for the walk's sake, or because he had to get to his distant destination, and be no more tired. Soldiers can march better when the band is playing, and with less fatigue. The same men who would stand two hours to watch a parade would be more fatigued by half an hour's wait on the corner while the wife was shopping, or while waiting for a train which was "thirty minutes late." The person who said, when standing in line at the theater ticket office, that he would "rather walk ten miles than stand five," expressed a psychological and physiological truth.

Interest in work first requires a steady job. A worker cannot be interested in a job that is uncertain. Seasonal workers invariably decrease their output at the end of the season in order that they may have employment as long as possible. So, steady employment must be assured before interested can be expected to continue, once it has been aroused.

How to make work interesting is a problem for investigation and experiment. There are all kinds of minds and bodies. Some need abundant exer-

(3) Reference No. 64, p. 171
cise, while others are most efficient in quiet occupations. Some men get
the best development of mind and body by some other means than by striving
for recognition and praise. They are happiest merely with a comfortable
existence, and do not want perplexing problems, although their minds are
not idle. Others are lost unless they can have responsibility and feel
control of something; they thrive on responsibility. Both are following
nature's laws.

If a man devotes a great deal of attention to and interest in his
work, becomes able to do more than the task immediately before him, and
yet is not given an opportunity to exercise his ability, his interest is
stifled. The job he is on, and in which he was formerly interested, be­
comes monotonous. An interesting incident illustrating this is given by
F. H. Selden (4) in the case of a machine, the low-paid operator of which
left his job, making it necessary to put another man in his place. The
new operator was of the investigating type of mind, and immediately took
an interest in his job. He "looked the machine over, fixed it up, and de­
cided to run it on a faster speed. To do this he must watch it very close­ly, which necessitated his keeping his ear close to the cutter. He was a
tall man, so secured a nail keg, sat close to the machine, but as his ear
was directed toward the cutter his eyes were apparently looking about the
room. A day or so later the foreman called him down for his lazy tenden­cies in sitting at his work, and the result was that the operator put his
machine back on the slow speed, and assumed an attentive attitude."

The ability, energy, and attitude of the employee must be appreciat­ed and duly recognized if his interest is expected to keep up. Promised

(4) Reference No. 60
promotions and advancements have been made to stimulate interest in the
work, but there is danger of overdoing this. It has a tendency to draw
the worker's attention away from his present task, with the highest po­
sition as his goal instead of the next step above his present job. There
are usually too few positions to which the employee can be advanced, and
in his unrewarded expectations he becomes antagonized by not having his
expectations realized. Youth is too often inspired by being told that
everyone has an equal chance to do great things. This teaching, while
it ought to be heeded more than it is, often is heeded by those who have
not the slightest chance in the world to do really great things. They
simply do not have the capacity, but they take this teaching to mean
that they do have ability to fill great and responsible positions, and
the ambition to attain such positions outweighs the hard work of prepar­
ing for such positions. Then when the individual fails to live up to his
expectations, he drops out disgruntled. He thinks that his "boss didn't
keep his promise" to promote him. The ambition to secure promotion and
advancement, while essential, should not be the sole qualification for
advancement, and an attempt to secure interest in work by offering the in­
ducement of promotion often has exactly the opposite effect to that for
which it was intended. Attention must be directed more to the work itself,
if the worker is to become interested in it.

The transferring of men from one job in the forenoon to another in the
afternoon when the work is especially uninteresting, makes for a variety
which adds greatly to the interest, but there is a limit to this. This is
an attempt to get away from the job because it is uninteresting, instead of
making it interesting so that the worker will want to stay. Shortening the
hours on any one job does, however, tend toward relieving the monotony of it, because the curve of readiness or interest has less time to fall to the vanishing point.

Association with other workers in picnics, athletic contests, dances, etc., has an effect of increasing interest in the plant, for the workers like to be among the people with whom they become acquainted and learn to like, and want to remain employed at the factory where their friends are employed. This incentive is also subject to abuse by over-doing, and creating the interest in the association itself and not in the work.

Company magazines and papers, which tell of the plans for the future and show the interrelation between the work of the employees and the success of the plant, together with a statement of what the successful outcome of the plant will mean to the employees, is proving very helpful in some establishments in keeping up the employees' interest in their work. Individual progress records, showing each individual just what he has accomplished from day to day and week to week, serves as an inspiration to him to raise a former record. These may be of three kinds: Quality, Quantity, and Economy, as shown by cost records. (5)

Even more successful than these individual records are the Group Progress records which have been used, because of the competition of a number in a group. When an individual gets some distance below some of the other workers he loses interest, and only the highest few take much interest in their record. But when there are several in a group, of which a record of progress is kept, there are always some in the group who will bolster up the others in the group to better work. It is perhaps this same reason

(5) Reference No. 69
there is always more enthusiasm and effort expended over football or base ball games than over track contests. There are larger groups competing against larger groups, while in tract events the competition is largely individual competition. The writer was told by the secretary of the Company, in a visit to the Atlanta Steel Mills, in Georgia, that the output increased 20% after the introduction of competitive group progress records in the mills, kept on blackboards on the walls of the mills. There was such rivalry between the groups that one group would almost consider it a disgrace if it should fall below the record of the other groups, and thereby be looked down upon by the others.

This method of creating interest in work presupposes fair treatment by the management. If the data gathered from these records is going to be used as a basis for cutting rates, serious difficulties will arise. As soon as the workers feel that they are being tricked into interest in work in order that the employer alone will increase his profits at their expense, then the game is all off. In cutting off a dog's tail, one cannot save his feelings by cutting it off an inch at a time. Creating interest in work is not a process of giving with one hand and taking away with the other.

The so-called "Suggestion System," when not abused, has been very successful in creating interest in work. Workers are encouraged to write out their suggestions for improvements and send them in to the management. The united suggestions of the whole number of employees in the plant can be of more value than those of any selected few. Many of the suggestions may not be worth much, but they show that the worker is interested in his job and thinking about it. When suggestions are rejected, due explanation should be made to the suggestor, in order that he may know that it has not been
the occasion for exploitation. Prizes for valuable suggestions can be
given with publicity, appealing to the motive of social approval.

This system has been abused in perhaps more cases than any other in­
centive, by the management. Often the rewards, or prizes, have not been
made on a basis of equality. A six-dollar-a-week beginner, who furnishes
a suggestion that is just as valuable as one handed in by the sales manag­
er, rarely gets the reward upon the basis of the suggestion, but upon the
basis of his rank and the management's estimation of him. Some employers
have cultivated the idea of "Give 'im a dollar and call it square," or
have conveyed the impression, when awarding the prizes, that the prize is
for "the interest shown," more than for the suggestion. A confiscation of
inventions of employees, by the payment of a mere portion of what they are
worth, cannot possible expect to secure interest in the work and loyalty
toward the employer. A fair and just payment for suggestions which are
really valuable is one of the best investments the firm can make. Incom­
petent foremen have utilized the system as a means of ascertaining who in
their departments are likely to prove so efficient that they may attract
notice from the superiors and be competitors for their jobs as foremen,
then after they get these men "spotted," play politics to remove them. The
suggestion system cannot solve the problem of creating interest in work,
for all people do not have the originality and imagination necessary to
conceive of new idea, and of those who do, all cannot express them. But
it can aid other methods.

It would be ridiculous to suggest any one panacea for interesting
work. Industry must be changed from repulsion to attraction. Interest in
work removes the gap between endurance and pleasure, between making a liv­
ing and living a life.
INTEREST SECURED THROUGH EDUCATION.

In the days when the only cooperation between employers and employees was that which was secured by means of coercion, employers believed that the more ignorant they could keep their employees the better they would serve their purposes. The blind horse on a tread-mill was a perfect illustration of what a laborer should be. He did not know why he was treading and could not see that he was getting nowhere, therefore he was an ideal workman. All the better for being blind because he could not kick understandably. The education of the laborer was not only looked upon as useless, but considered dangerous.

But the days of the treadmill laborer are past. Employers are rapidly realizing that the more intelligent man is the less expensive in the long run. The installation of Employee Representation plans are proof of the awakening to the fact that the worker can take more interest in work concerning which he can exercise self-expression, control and responsibility. But if his responsibility is to increase, his knowledge of how to use the responsibility must also increase, or a state of affairs will exist that was not intended when the responsibility was granted. The failures of Employee Representation systems have been largely due to the neglect on the part of the employers to recognize this fact. Responsibility, without a capacity to intelligently exercise it, will never create interest in work. This is what necessitates educating the workmen to their responsibilities.

Interest in work implies a desire to produce, that is prompted by internal motives. Interest and monotony are not characteristics of work, but are characteristics of the workers in their reaction toward work. No job is inherently interesting or inherently monotonous. The fact that one worker will find a job interesting, which same job proves monotonous to another
worker, is proof that the problem is not centered in the work, but in the
worker. Work is interesting or monotonous to the worker, and not in and
of itself. There are jobs which are usually considered to be monotonous
which, if sufficient, care, thought and attention could be directed to-
ward them, could be much more interesting than they are, if the worker
only had the knowledge, ability and aptitude.

Here is where the specialist—the industrial teacher—comes in. The
foreman cannot attend to this phase of the situation because his business
is production, and he rarely has either the time nor the experience. He
may be an excellent foreman, but often the best foremen are the poorest at
teaching others.

Many industrial establishments have so-called "vestibule schools" which
serve as an "entrance" to the factory, and in which new employees
receive preliminary training. This sort of school provides means for bring-
ing an unskilled employee into the possession of sufficient skill to earn a
desirable wage when he starts in, and gives him a certain amount of choice
of work in order that he will not become quickly disinterested in the job
to which he is later assigned. In this school the beginner gets a variety
of work, but when he is started directly in the shop without this "vestibule"
schooling he is put at whatever simple work he can do that will not disturb
the foreman, and he learns nothing about any but the one machine he is to
work on. He is usually taught only how to put a certain kind of work into
the machine, perform one operation, and take the material out of the machine.
But in the school, the teacher helps him to study out his machine, his mo-
tions, and purposes. A beginning is made in interest because there is some-
thing to think about. When a boy enters the shop without this preliminary
training he is full of questions and untried ideas. If he is merely "broken
in" so he can begin to produce as soon as possible his questions are suppressed. In the "vestibule school" he has an opportunity to have his questions answered and to try out his ideas. If a boy goes directly into the shop he rarely coordinates his task with the general activity of the plant and does not see how he is contributing to, or is vitally connected with, the world in general. But the school shows the boy who has just "gone out into the world" of industry, how the different cogs are essential factors in the total process, and he is inspired by it in a way that would be impossible if left to work out his own problems.

These schools are only a part of the work of education in industry. A football coach, after having explained all the rules of the game to the players before the season begins, and starting them off by coaching them in the first game, does not then excuse himself and allow them to do as best they can the rest of the season without any suggestions and advice. In industry, not a week should go by without an effort having been made to increase the knowledge and interest of the workers in their work. The business of the industrial teacher is to make work interesting. All employees must be given constant instruction, and help, and the teacher must see to it that they are not dissatisfied.

Lectures and moving pictures on the securing of the raw materials used in the plant, its transportation to the factory, the methods of distribution and its uses are profitable to the workers, because they are things they like to know about their own industry, and that show them their connection to the outside world. Pictures of the product in use by purchasers show concretely the service the factory renders to society,
A history of the house and what it has accomplished, either thru booklets or lectures, with a sketch of the plans and purposes for the future, are designed to arouse loyalty to the firm. This can be overdone, however, by laying too much stress upon the importance of some of the founders and builders in the firm's history. People give allegiance to strong men, but resent egotism. In the public schools, the great men of history, the founders, builders, saviors, and all those who contributed to its advancement, are held up for admiration, for the purpose of creating a love and loyalty toward the country. But in industry, the receptive attitude of the "pupils" toward the builders and saviors of the firm is different to begin with. There is not the feeling in the public schools, that there is in industry, when listening to the story of one who accomplished great things, that "Yes, but he was looking out for the profit he could make," and this must be borne in mind when holding up the "great men" of the firm before the employees.

Some employers have been afraid that the workers would learn some of the shop secrets and take this knowledge to other shops, so have used their power to prevent the men from knowing any more about what they were doing than was absolutely necessary. "In heat treating, for example, the recording pyrometers are sometimes placed in a locked room and only signal lamps used at the furnaces. The men who actually do the work know nothing of the real process, except that a red light means too hot, or a blue light means too cold," while a white light means exactly right. (1) We have gotten away from that idea in the selling end of industry—why not in the production end? Human nature is such that if any one thing is denied, that

(1) Reference No. 15, p. 47
is the very thing most desired. Tom Sawyer discovered this trait when he got his fence whitewashed by otherwise indisposed playmates, by merely making them believe that it was a job too particular for their limited ability. "The Russian employer thought that the secrets of his business were too important to be exposed to the gaze of mere workers, and the workers, thinking otherwise, searched for these secrets with axes. They have not found them, but the employer is guarding his secret either in the grave or in a foreign land. Someone else is guarding his plant." (2)

Teaching the workers at the heat treating furnaces, the effects of overheating the steel, or of forging it when it is too cold, and making them understand what they are doing, will be more profitable than to merely teach them to watch for blue, or red or white lights. Nobody can be interested in work he does not understand, so the worker must be taught not only how, but why he should do the work well. "We must show him why the various things must be done in a certain way; not merely tell him to keep the center holes in a bar clean, but show him that the work cannot run true unless he does. We must show him how this affects the work, how it makes additional work for the grinder, how it may easily cause the rejection of a piece if the error is made." (3) The worker who understands the "why" of his job will like it better and do it better than the person who merely imitates the methods used by others, or "follows directions" only.

Teaching workers the reason for each stop in their work may be more difficult for the management than to play out a set of rules, instructions and sequences of motions to be automatically followed, but it is also more

(2) Reference No. 3, p. 175
(3) Reference No. 15, p. 58.
profitable in the long run to both the industry and the worker.

It is not as difficult a task as would at first appear to find a way of making a man interested in repetition jobs. An illustration of how a "snagging grinder," whose job is one of the most uninteresting jobs to be found, could be interested in his work, is furnished by Mr. F. H. Colvin (4). The worker was first taught the necessity of wearing goggles to protect his eyes, then the "advantage of having the grinding wheel kept true; the advantage of using a wheel that is loaded or glazed; the difference between the two; the fact that the grinding wheel is made from a mineral or from the product of an electric furnace; the way in which the crystals are held in a bond; the fact that a wheel is really a revolving cutter with thousands of cutting points; the reasons some grades and grains cut better and stay sharp longer; the best speed to run the wheel; some idea of the power required; perhaps a notion of where the power comes from," and pictures were shown him illustrating how the grinding wheels are made.

One of the best methods of arousing interest in the individual is to show him his relation to the rest of the plant, and the part he plays in the group as a whole. In some plants, the education specialist takes each newly hired employee on a trip thru the plant before setting him to work at his job. The different processes are pointed out, explained, and the finished product is also exhibited and explained, attention being carefully drawn to the relation of each process to the task he is to perform, the effect upon other processes of inefficient work in his job, and the effect upon his work of poor work in the processes that precede his. The

(4) Reference No. 15, p. 50.
use of employees in rotation as factory guides for visitors, and the invitation of the families of workers to go thru the plan on a visit, impresses upon the employee his relation to the rest of the plant.

The teaching of thrift is an important part of the work of the education department of the factory. Thrift is not only a good thing for the workers, but is profitable for the employer because it stabilizes the employees and reduces labor turnover. Radicalism abounds among those who have nothing to lose, and the teaching of thrift conquers radicalism.

One very important function of the Education Department is that of furnishing advice and aid to employees. The White Motor Company maintains a "Consultation Bureau" with legal aid and other kinds of advice. The men are allowed to use the bureau on company time, but it is a saving to the company, because previous to the establishment of the bureau the men had to lay off during working hours to seek outside aid and advice. The plan has been much appreciated by the workers, who once petitioned the company "to have more men in the bureau to answer their requests in order that they need not spend so much time away from their work." (5)

In the Ford Motor Company's plant, in Detroit, the Education Department renders various kinds of advice and aid, including legal advice, financial relief, and even aids in settling domestic difficulties occasionally. (6)

A manager of a Michigan manufacturing plant has succeeded in freeing his men from loan-sharks by means of such a department in the factory. Previous to the installation of the department, four hundred men in the plant were victims of loan-sharks, who charged interest at the rate of 100% to

(5) Reference No. 16, p. 10.
(6) Reference No. 16, p. 22
150% per year for small loans. One man had not drawn his own salary for thirteen years. The Education Department undertook to investigate every garnishment, and when it suspected an excessive rate the claim was contested. The loan-sharks could not brave the courts, because of the illegal interest rate, and inside of three months there were no more garnishments. A fund was provided to be used in making small loans to workers who were in need of them. (7)

The Milwaukee Electric Railway and Light Company has used a similar method of ridding its men from loan sharks, and the garnishments which formerly came into the office at the rate of twenty-five every pay day, have almost vanished. Legal advice is also dispensed. "Threatened divorce suits have even been averted. Wives bring their grievances about sharing their husband's wages. Even neighborhood quarrels get into the office. The point is, the men are better workers when not worried by debts, courts and domestic troubles." (8) There must not be too much meddling in and attempts to straighten out family affairs, or it is going to react on the worker's attitude. He doesn't appreciate having his employer, or anybody else in the plant, go into the details of his petty home affairs, and the one in charge of such work should exercise careful discretion. But anything that will relieve the worker from his worries, help him see a clear future, and be happy, will make him a better worker.

A large amount, if not most, of the strife between employers and employees is due to the fact that neither understands the other. Understanding requires information, which is secured by some sort of educative process. The laborer who, for instance, believes that invention is a detri-

(7) Reference No. 58, pp. 459-461.
(8) Reference No. 16, p. 147.
ment to him, must be shown that the invention, by making possible a more economical production, and thus lowering the selling price of the product, increases the demand, which calls for more labor in production of more product to meet that demand. Not only that, but by the production of the new invention, more labor is needed, and especially skilled labor. The laborer must be shown that labor-saving devices relieve drudgery, save the worker from strain and exhaustion, and thus enable him to use his energy for a better enjoyment of life, which is, or should be, the ultimate aim of all industry.

Albert S. Bond, president of the Packard Piano Company, has said, "The firm that makes the best men will make the best pianos, and Mr. Feiss, of the Clothcraft Clothes house says, "In order to meet with real success, it must be recognized that it is a function of management not only to build up a 'manufactory,' but to build up a 'man factory,' as well." (9) It is the purpose of education in industry to supplement the making of product and money with the making of better men.

(9) Reference No. 24.
THE GOLDEN RULE

Fair wages, reasonable working hours, comfortable working quarters, healthful conditions, and protection from accidents are now no more than primary requirements in any factory. Without them efficiency laborers cannot be secured and held for any length of time. The employer who expects, in return for these, any more than the common average of uninspired service is sure to be disappointed. If he treats his men as though he were "dickering" for the purchase of a commodity, they will give him in return, at most, a commodity. If he treats them like machines—as merely cogs in the mechanism of the establishment—they will function like machines. If he wishes to arouse their interest in the success of the plant, make use of their brains and strength, thereby increasing their efficiency as thinkers and workers, he must recognize them as men, and give them in some measure what he asks.

One of the great causes of industrial unrest has been the fundamental misunderstandings and mistrust of one another by employers and employees. The mistrust of Labor is based upon the fear that employment will not be continuous, that machinery will displace labor, that speeding-up processes, long hours and overtime, will diminish the amount of work to be done, that unskilled, imported, female or child labor will be substituted for skilled labor, and that Capital will retain more than its just share of the product.

Capital is constantly afraid of strikes and their consequences, of boycotts, and of labor combinations which would lead to union control of the labor market and wages, restriction of output, and interference with discipline. The employers' publication, "The Square Deal," indicates some
of the fears of Capital in its platform of principles: "No closed shop, no restrictions as to the use of tools, machinery or output, except as are unsafe, no limitation of output, no restriction as to the number of apprentices and helpers when of proper age, no boycott, no sympathetic strike, no sacrifice of independent workingmen to labor union men, and no compulsory use of union label."

Evidence of fair and just intentions on both sides must replace this distrust and suspicion before industry can advance to the degree of efficiency to which it aspires. Employer and employees are engaged in a common enterprise, and must help each other. The contact between them should be such as to give each a feeling of security in the motives of the other. The ability to put oneself in the place of another, seeing as he sees, feeling as he feels, thinking as he thinks, is too rare in industry. The cultivation of such ability would prevent many of the misunderstandings which now arise. Injustices and misunderstandings between the parties to industry are largely the result of inability to recognize the common interest they all have in the success of the enterprise in which they are both engaged.

When Capital's fears of Labor are eliminated there is a corresponding elimination of Labor's fears of Capital, and vice versa. When the possibilities of strikes, reduction of output, etc., are removed, there is an increase in the readiness of Capital to invest. When the fear of unjust treatment of Labor is removed in the way of inadequate wages, unemployment, etc., then Labor puts forth more energy, and output increases.

If the relationship between the parties to industry are antagonistic and hostile, any plans and schemes that may be introduced will be futile.
The relation is one of attitude, and upon the elimination of fear and the establishment in its place of confidence and faith in fair intentions and just dealings, depends the successful working out of the problems of relationship. In short, the attitude of the employer toward the employees must be guided, as no less an able man as Judge Gary himself has said, by the principles of the Golden Rule. What men want is the feeling of confidence that they will receive "fair play" from their employer.

The employer, when such a solution of his labor problem is suggested to him, usually says, "Why not tell that to the men who threaten to strike whenever their demands are not granted, and to the men who soldier on the job and think only of the pay they get and not of the work they do for the pay?" But the employer must take the initiative—must set the example. Robert G. Valentine put it this way: "Employers should stop talking about the loyalty of their employees until they are ready to make an equal noise about their loyalty to their employees." The feeling which the workmen entertain for their employer is a reflection of his attitude toward them. The employee who is not loyal to his employer renders only half-hearted service at best, while the employer who secures the loyalty of his men secures better service, and the men, because of their frame of mind, accomplish more with less effort and less exhaustion.

The employer must take into consideration the point of view of his men by mingling with them and by learning from them what their needs and rights are. It has been said that "familiarity breeds contempt," but careful reflection will show that the saying is incomplete. The degree of truth involved depends upon who the parties are to the familiarity. If the parties are honest and unselfish, then "familiarity breeds confidence," is a truer statement.
In the old system of industry, where the employer worked with the employee, and not so much for him, there was familiarity, and also loyalty. But today the large corporations are made up of stockholders, directors, managers, executives, sub-executives, and employees. The stockholders are the unidentified employers. Personal relationships between the stockholders and the employees have almost entirely disappeared.

This is where Management comes in. The management is the connecting link between the stockholders and directors on the one side, who are responsible for shaping the policies of the corporation, and the employees who perform the routine tasks, on the other. The only way in which the workingman gets his impression of the real employer is through the kind of men placed in immediate authority over them—the management—and the sort of justice meted out by, and confidence in, the management. Upon the management, then, largely depends the degree of cooperation, and hence the efficiency of the establishment as a whole. Those whose work is that of directing other men cannot be too considerate in attitude, or too impartial. Men who do not possess these qualities, who do not understand human nature, and who cannot sympathize with "the other fellow's point of view," should never be placed in positions of authority over other men.

Men admire a real leader, and will follow one who shows himself worthy in character and ability. A real leader knows his men and understands them. He gives attention to their complaints and irritations, no matter how trivial. He has a personality that is a psychological power to get others to do things and be happy in doing them. You can secure a man's signature to a contract with the wages and hours specified, but you can't get production that way. A new contract—a psychological one—is entered into every day and hours, and the production will vary in direct ratio to the considera-
tion given him and the degree of cooperation with the management. The employees must have confidence in the sincerity of the management, must be confident that the management will not try to "put one over on them," must have confidence in the judgment and intentions of the management. It is easy enough to meet the opposition of competitors, but it is next to impossible to overcome the opposition of the workmen if they have lost confidence, or have never felt confidence in the management.

Lack of consideration for the desires, rights, liberties, and happiness of the workmen has cost enormously more than many managers realize, in decreased production, which means increased labor cost. Harry Kimball recites an illustration (1) of a foreman in a mill who refused to grant permission to an Italian to take a day off to attend the wedding of a cousin. The foreman thought of him as "only a 'wop' anyway," and did not realize how much those social occasions mean to those foreigners. As the result, he lost his hold over all the Italians in the department, because he lacked the power to sympathize with them and see their point of view. The same author tells of a factory in which a group of twenty girls were informed at ten o'clock one forenoon that their services would not be needed after noon of that day. They had not had the slightest intimation previous to that time that they were to be discharged, and as most of the girls were supporting themselves, they had not planned on having to make their previous pay last until they could get another job. The news of this incident soon spread throughout the town and the factory was given a reputation for cold-blooded dealing with its employees. This one incident cause a feeling that would take several months, or years, to overcome, and perhaps it never could be outlived.

(1) Reference No. 34, p. 59
In another factory (2) the management made a practice of never announcing whether the plant would run on a holiday or not, until the night before. The executives would plan automobile trips, etc., but they never considered whether or not the employees cared anything about making plans for enjoying holidays, and the only enjoyment the workers could have on the holiday was what they could plan after going home from work the night before.

A great many firms who have realized the importance of fair dealings with customers and the public have neglected the application of the same principles to their dealings with their employees. The same firms that would dismiss a salesman who was discourteous or careless in his treatment of customers, have usually retained the foreman or manager who is discourteous and careless in his treatment of the men under his supervision. Salesmen are often instructed to fulfill the desires and needs of the trade, and look after their complaints to their "guaranteed satisfaction," regardless of cost, and to always "Treat customers the way you would want to be treated if you were in their place," and have failed to see the need of the application of the same principle in dealing with employees.

The problem of understanding employees and of being understood by them is a vital one, since it is thru the appreciation and understanding of each other that cooperation and loyalty are secured. The Packard Piano Company, in their attempts to promote this common understanding, have adopted a motto which contains the key to the whole situation: "If there is no harmony in the factory, there will be none in the piano."

(2) Reference No. 34, p. 59.
Page 91 was skipped in the original volume.
CONCLUSIONS

In order to attain the highest degree of efficiency in industry, and at the same time bring about permanent industrial peace, there must be a realization and appreciation of the necessity of a genuine practical cooperation between all the parties of industry.

Methods of meeting the altered relations between employers and employees, which have been the result of the expansion of industry, have not caught up with the rapid development of industrial technical science. Many employers are attempting to cope with twentieth century conditions with nineteenth century methods, and cannot understand why they are not successful in producing efficiency. Upon the human factor depends the future of American industry.

Since personal relationships have disappeared, new methods and devices must be created to preserve faith and confidence, which are more essential now than ever before in preserving industrial peace. The plans of many industrial establishments for supplementing personal contacts, including industrial betterment plans, mutual benefit funds, the many so-called welfare work plans, profit-sharing schemes, stock ownership plans, industrial representation, have often rendered useful service, since whatever fosters common feeling and interest tends to eliminate differences and strife. But they are mere beginnings toward developing better relationship within industry, and while they are steps, they do not necessarily lead to the floor above. There is no panacea—no artificial remedy—for making all things right within the plant. The same plans and methods that would be effective in a mining camp in Virginia would be entirely inadequate in a telephone exchange office in New York City. Methods that might prove successful in a furniture factory in Grand Rapids would not be likely to have the same re-
sults in organizations like the International Harvester Company, with employees distributed over the entire country.

In regard to welfare work, employee representation, and the other methods, it must be remembered that they are not substitutes for justice. In the absence of mutual trust in each other, if the men feel that they have to use coercion to obtain justice and fair dealings, all such schemes will come to nothing but continued strife. The most effective methods of promoting good will are usually the simplest.

Too many employers assume that the mere payment of wages gives them the right to expect absolute fidelity on the part of the men. But all the moves on the industrial checker-board are not determined by financial considerations. Even the so-called "economic man" has some human qualities. The law of "supply and demand"—or, as one employer expressed it when dealing with his men, the law of "Supply and be-damned," (1) will not solve the problems of industry.

There need be no hesitancy on the part of the employer because he believes cooperation will mean the confiscation of his profits by his employees. The advantages gained thru the cooperation of the human element will much more than offset the high costs without cooperation.

The manager who looks to his balance sheet as the sole indicator of the success or failure of his plant is short-sighted, and has only a faint conception of his purpose in the world—of his duty to humanity. Some of the most important employments are not conducted for profit, as for example, the services of religious, charitable, and educational institutions, national, state and municipal services, household work, etc. The day should come

(1) Reference No. 66, p. 23
when industry will no longer be considered as only a matter of private gain. The purpose of industry must be looked upon as the advancement of the well-being of humanity, rather than the accumulation of wealth by a few. Human life is infinitely greater than material wealth. The happiness and well-being of the individual must not be sacrificed in order that the more fortunate and powerful ones should enlarge their individual wealth.

Before the war, such statements would have been branded as visionary and as socialistic. But during the war there was, in our country, a national pooling of lives and property. The rights of individuals, as such, gave way to the rights of the nation. In the first years of the war, Germany fired five shells to every one fired by England and France, but in the last year the situation was exactly reversed. When the American boys stopped the Germans at the Marne it was because there was a continuous flow of ammunition from those at work back home who had laid down their individual aspirations and taken up the spirit of cooperation. Why should industry return to warfare after it has been so successful in helping to bring about world peace?

Employees must be taken into confidence and shown that their interests and those of the employer are common and not opposed; that increased profits to the owners and managers mean increased profits to them, and thus to the community, thru which both are bettered. Employees must have an opportunity to express themselves in matters that effect their welfare and happiness, and their right to exercise responsibility to the extent to which they are capable, must be recognized.

When employer and employees, thru the management, learn to distinguish between wealth and well-being, when each sees the other sensitive to that to which they themselves are sensitive, when they seek after the interests that
unite instead of those that divide, when each recognizes and appreciates the endeavors, aspirations, and difficulties of the others—then industry will be on the road to a common understanding, cooperation, and peace.

---THE END---
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