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THE MANAGER, THE WORKMAN, AND THE SOCIAL SCIENTIST¹

By H. S. PERSON²

DISCUSSION

DR. HENRY C. METCALF.³ I have read the paper by Dr. Person with great interest. I have read it several times, and I have listened to the reading of it by the author this afternoon with fresh interest. It is difficult for me to understand how anyone can adversely criticize its fundamental philosophy.

I might state at the outset, perhaps, that my chief disappointment in the paper is due to the fact that it offers no constructive machinery for putting the fundamental ideals it embodies into practice. As I interpret it, the paper is a vital contribution to the theory of the science of management. There is at the present time, however, a widespread and growing interest in getting something in the nature of a sound coöperative mechanism in the practice of the business world—a practice that will enable the employees to have a larger voice in management-sharing where the assistance of qualified outsiders may be of some practical service.

Dr. Person's point of approach to the problem of the science of management, and his interpretation of that problem is different from my own but that does not matter here, and the suggestions I have to offer I do not intend as adverse criticism of the paper.

They occur to me, however, as helpful in directing attention to what we might perhaps call emphasis.

With this general statement I want to direct your attention for a brief time to a few thoughts with reference to the so-called advantages and disadvantages of the employer, the workman, and the social scientist.

With reference to the employer manager, the first disadvantage is stated as the concentration of attention upon the unstable elements of the varying details of the business. That certainly, in so far as it operates, is a disadvantage. I am wondering, however, whether such concentration of attention upon that which is not fundamental and permanent should be regarded as a disadvantage to the manager in the sense that it is inherent in his position, or rather should it not be regarded as evidence of managerial weakness.

¹A paper presented at a meeting of the Taylor Society in Boston, Mass., Saturday afternoon, March 3, 1917, and printed in the BULLETIN of the Taylor Society, Vol. III, No. 1, February, 1917.

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There are many able managers who so organize and control their businesses as not to be swamped by detail. These capable managers, men with far-seeing vision, carefully determine policy and know how to distribute responsibility among co-workers and leave details to subordinates and thus keep themselves free to work out the future policy of the company.

The Filene Store has been mentioned here this afternoon and I think I am justified in saying that in working out that great establishment the Filene brothers and those associated with them in determining the destiny of the store succeeded in not being swamped by the details, numerous as these were. It has been the policy of this firm to think and live in the future. Once policy is well defined, details are turned over to others. The business is so organized and managed that some member of the firm is able to be away from the store a good share of the time. What is true of this firm is increasingly true of other businesses.

In this connection, I was interested in the statement that managers do not have time to read books, periodical literature, etc., and thus keep abreast of the times. It is true that a certain type of manager thinks that he cannot halt for a two-page report. Everything placed before this type of manager must be as brief as possible, caught "on the wing" so to speak. But the type of manager into whose hands the control of business is bound to come does find time to become a real student of the problems of business management. There are many such men in the business world at the present time, men who are not only reading and digesting the scientific literature of business, but some of the best contributions to this literature are from active business men. An increasing number of these progressive leaders have got together costly collections of books and scientific periodicals for their firms, some of them systematically devote a part of their own time to study and have organized opportunities for their executive assistants to do likewise. One of my business friends assured me last autumn that he was going to take "a sabbatical year" in his business. On congratulating him and asking if he intended to go abroad, he replied: "No, I am going to spend a part of my time in my library with my books." This same business manager is a frequent lecturer in our schools of business administration and before groups of employment managers.

In a firm in Cleveland, Ohio, about a year ago, I was very much interested to find the heads of all departments in session at eleven o'clock in the morning. I asked the manager how they arranged to take all the foremen from their posts a full hour during business time. He replied that when they began their federal system of management there was grave diffi-

culty and that the first task the heads of departments had to meet was the training of men competent to take their posts when they were absent. The heads all along the line learned the important business principle of training their subordinates in the capacity for and practice in the habit of responsibility and cooperation.

Several firms are now working on those advanced plans of management-sharing, thus freeing the heads from being swamped by the unstable details of the business.

I have recently been making a study of the use of the committee system in the problems of business management, and I am convinced that there is a wholesome recognition in the business world of the futility of the manager carrying too many of the details of the business. The sound business leaders are dividing and sub-dividing the detailed problems so as to leave themselves free to determine the broad policies of the business.

In the growing importance attaching to the human element in business, grave problems of selection, placing, protection, health, instruction and training, just methods of remuneration, promotion, etc., are being given scientific study and control. And these vital problems are coming more and more under the control of specialized individuals and selected committees and boards, as well as the detailed problems having to do with material, standardized mechanisms, processes, etc.

The employer, usually the autocratic type, who allows himself to become swamped by details will certainly be at a disadvantage compared with the employer who has learned the important lesson of the wise distribution of responsibility. Personally, I regard such a condition not as an inherent disadvantage of the manager's true function but rather as a sign of managerial weakness.

In stating the second disadvantage of the employer, Dr. Person tells us "that the very nature of his responsibilities *compels* (italics mine) him to regard and to value all things from the point of view of profits."

Now, any one who has a keen appreciation of the problems of business management, and especially where competition is fairly keen, knows the constant and forced pressure the employer is under to watch profits. Under our present system of business organization and management, with our current ideas of private property, the dictatorial power accorded to stockholders, the attitude of the law toward property as against elemental human rights, and the false emphasis given to money there is a tremendous pressure upon the employer to think constantly in terms of profits.

But even in the face of all this pressure of opinion

custom and law, I cannot admit that the true nature of his responsibilities *compels* the manager to think in terms of profit. Such employers are not our broad gauge, far-seeing business leaders. In these dynamic times when business is rapidly taking on the social valuation point of view; when society is sure to compel the transference of the value concept from the material to the human, I cannot accept this viewpoint of profits.

A business must be run so as to make profit. But is the best way to make profit to think constantly in terms of profit? It is not even sound business philosophy, to say nothing of social philosophy, to give over-emphasis to profits.

I am obliged to interpret all business from the human point of view. Business to my way of thinking is a vast mechanism for the discovery, adaptation, instruction and training, protection and rewarding of human talents—a vast capacity-catching and capacity-developing mechanism. Business is a means to an end. That end is not profit but a higher standard of life. The best asset any business can have is the whole-hearted, enthusiastic interest of all the laborers in the problem of improving the quality of their *own* labor. It is the human quality fact that counts in business and upon this the attention of the employer as the best means to profit should be concentrated. Profit more and more must become a by-product of a scientific and humanized business mechanism.

I have no quarrel with Dr. Person as to the importance of profit, but the manner of approach, the emphasis, the attitude toward profits is in these times, it seems to me, very important. A grave problem just now confronting society is a right attitude toward these problems of business management. I sometimes think that the right attitude toward them is more difficult than the aptitude for their solution, once the proper attitude is reached.

With the third and fourth difficulties with which the manager contends, namely, the tendency, perhaps unconsciously, to over-standardize certain elements in his problem, such as the quantity and quality of the human and the demand factors, I heartily agree. There is a rapidly growing number of business managers who through study and observation are getting the social welfare point of view of industry and are coming to realize that the human element cannot be submitted to the same rigid scientific processes and methods that have so wonderfully built up the material side of business. They are realizing that the human element must be in the hands of artists as well as scientists—that the spiritual is the vital. The whole man—as a sacred personality, as a physical, intellectual and moral oneness, and as a social mass-

man—is being more and more recognized as the best business asset.

A few words now with reference to the advantages of the employer. These are dwelt upon as superior intelligence, great natural ability, keen observation of industrial facts and policies, sound judgment, vast technical information, and particularly the sensing of the complexity and delicacy of the industrial machinery.

With this statement I am in the main in accord. We are here face to face with the vital problem of the variety and generality of managerial ability, about which there is wide divergence of opinion. Personally, I am a believer in the generality of human ability, and am convinced that there is far more business ability of high order than is commonly believed. Modern psychology and education are challenging the old theory of the rarity of creative ability.

Again, under our large scale business management, what is usually regarded as managerial ability is a very much divided and sub-divided function. In important questions of extension, consolidation, integration, new lines of adventure, new policies, etc., not only those who are usually called business managers but important promoters, banking middlemen, executive groups of directors, expert scientists and artists, as well as many heads of departments, share in the work of management. There are very few business heads today, except in the smallest concerns, who are able to go faster than they can bring their associates with them. President Wilson states in his "New Freedom" that the average business could not continue a six month without the aid of the scientists trained in our universities. By and by when we have fuller publicity as to just what constitutes business management; when our schools of business administration have more vitally connected with the business world; when channels are more freely opened for the functioning of managerial ability; and when business comes to regard the discovery and training of ability as its greatest asset, we shall probably discover that managerial ability—of the kind society will tolerate—is not as rare as we have commonly thought.

Just a brief word now with reference to the workman as a competent judge as to the desirability of new policies, methods and mechanisms.

Dr. Person takes the view that the laborer is limited in his ability to pass judgment upon new policies, methods, etc., because of the "narrowness of his individual attitude of mind and the militancy of his organization attitude of mind." With this conclusion of the paper I cannot agree. Regarding those phases of the industrial processes, methods, mechanism, changes, etc., that concern the welfare of the work-

ing classes and through them the welfare of society, I cannot agree that the workman is any less intelligent or more narrow-minded than the average employer. I am convinced that the one side is just as human as the other, that both are liable to about the same short-sighted and narrow interpretation of the true function and meaning of business, namely, the liberation of the creative capacities of man.

I am further persuaded that had our business system been conducted more in the spirit of science and art, the deplorable militant attitude of both capital and labor would not have appeared. Labor probably has a keener, safer social instinct than capital. It appreciates the vital determining values, *i. e.*, the spiritual values in the business world more quickly and more completely than does the average manager. Labor knows the meaning and worth of the brotherhood bond better than capital and instinctively fights to protect it. The methods of aggression of the workman and manager are quite different but their attitude and narrow-mindedness are, I believe, essentially the same.

With reference to what the author has to say about the third part of his paper, namely, the social scientist, I find myself in hearty accord. I am glad that he gave the interpretation that he did to the terms "practical" and "theoretical." They have always been more or less of a hindrance in the way in which they have been interpreted by those within and those without business. Anything that will help remove this misunderstanding of the proper use of these terms is helpful.

I regard the paper by Dr. Person, ladies and gentlemen, as a noteworthy contribution to the theory of the science of management. It impresses me as particularly timely and of great value coming as it does before this Society. You have been criticised not only by organized labor but by many students of industrial and social problems as tending to interpret industry in too narrow and perhaps mechanistic a manner. Some able critics have held that you did not regard industry always as the vital social organism that it is. It seems to me, therefore, most timely and wholesome to have Dr. Person's broader social interpretation of industry brought before you.

No society in the country has a firmer foundation on which to build the broader social industrial concepts than your society.

You have given the business world the best scientific object lesson it has thus far received. What is above all needed now is the advancement of economic democracy and in this advancement we must more fully incorporate the elemental facts of human nature.

The scientist in the future will have to give a broader meaning to the "facts," and if we are to have

genuine industrial efficiency and harmony there will have to be worked out more genuine cooperative methods for the discovery, interpretation and cooperative agreement as to just what constitute the "facts."

As I interpret the paper by Dr. Person it focuses our attention upon the necessity of getting at the whole truth.

I stated at the outset of my remarks that my chief disappointment with the paper was due to the fact that it offers no constructive machinery for putting the ideals which it develops into practice and I hope before the evening is over that Dr. Person will offer some suggestions as to how he thinks his ideas may be made a practical business asset. I am a firm believer in the practical-theoretical method. Knowledge is power only when put into action; and the business world is crying out at the present time for constructive machinery for putting just such ideals as the paper embodies into practice.

The paper has been a real inspiration to me and I regard it as a vital contribution to the literature of your society.

MR. CECIL GREGG.¹ In to-day's discussion, you have talked only of the manager, the workman and the social scientist. Is there not another person, perhaps of no more importance, but whom it would be well not absolutely to forget?

Some time ago, when you gentlemen were in the habit of calling on Sunday night, you may remember that while you were waiting, you found on the center table a little book containing Charles Dana Gibson's drawings on the Adventures of Mr. Pip. Mr. Gibson has a faculty for illustrating the ordinary American life which most of us have led,—where the ladies naturally take the predominant part; and caricatured Mr. Pip as having the attitude of a human earth worm. Mr. Charles Darwin, of course, has said something fairly favorable to the earth worm, and the little work that it does in a quiet and unassuming way. And it is only in that attitude of Mr. Pip, that I most modestly,—not as a practical business man as you have explained the meaning of the term to-day, but more as a theoretical man,—have suggested and asked the question this afternoon—just in that earth-wormy manner: Where does the stockholder get off?

MR. H. K. HATHAWAY.² I told Dr. Person, when I came into the hall to-day, that I was not going to discuss his paper, and I don't believe I am, even now that I am here before you.

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To me, Dr. Person's paper is not something to be discussed, at least by a mere manager. To me it is an answer. Dr. Person has answered a lot of questions which I have "sensed." As Dr. Person points out, the manager frequently senses things that he is not able to define and analyze and express in words, and my reaction to Dr. Person's paper I find very difficult to express.

There is one thought, however, which Mr. Gregg expressed in a measure, that was brought up in my first reading of Dr. Person's paper, and that is, that there are three persons interested in this problem: there is the workman, the manager, and the social scientist, each of them asking something, the workman and manager perhaps asking more than the social scientist asks. The social scientist is merely trying to help the two. But there is only one of those three upon whom the responsibility for results falls, and that is the manager.

When it comes to questions of decision, questions of policy in the running of the business, the manager is the man who has to assume the responsibility for the results.

Let us suppose that we meet, three of us, around a table to decide some important question concerning the business. One of us is a representative of the workman, another is a social scientist, and the third is the manager. There is only one of those three who, if he makes a mistake, stands a chance of losing his job, of losing his reputation, and that one is the manager.

Now, I am heartily in favor personally of having the workman have a part in the management, of taking into consideration his views, his welfare, and everything that he is interested in, just as the social scientist is, and I think the majority of managers are. But the manager is responsible. He is the man who has got to decide. He is the man who has to bear the brunt, who has to pay the penalty if he does not decide correctly. The representative of organized labor—it is nothing to him if the business fails to continue. But it is something to the manager; and let me tell you it is something to society, as to whether the business succeeds or fails.

Now, no business can continue under our present conditions without earning profits. I mean by that, profits sufficient not only to give labor what it wants, but to pay a reasonable return on the money invested, that money invested representing not as some people suppose the surplus wealth of a few but representing the savings of a great many, and as time goes on I venture to predict that the capital invested in business will represent the savings of people generally, of the workman just as much as it is supposed to represent the surplus of the capitalist. And on that point

it seems to me that that solution of our social and industrial problems rests very greatly upon people becoming equally workmen and capitalists.

To get back to my subject: the manager is responsible, first, we will say, to his stockholders, because up to the present time under the present order of things he must earn dividends or his business will not continue, and not only he will be thrown out of work but a great many others. His next responsibility is to the consumer. He has got to produce his goods at a price which will enable them to be sold in competition with others and at a price which the consumer is willing and able to pay. There are two people he is responsible to. The third person he is responsible to is the workman. He has got to see that they are properly taken care of, that their interests are properly safeguarded if they are to work steadily and efficiently. Those three make up society, and the manager is the man who is responsible to society.

I do not think, for one, that the social scientist and the worker are entitled to the same say in the management of the plant, bearing no responsibilities, as the manager is entitled to, and as a matter of fact they cannot be. The manager is the man who has got to decide. He may be advised, he may be guided by the social scientist, he may be guided by the representatives of the workers. But under present conditions, don't forget for a minute that in the last analysis the manager is the man who has got to decide.

Now, I would be perfectly willing to be one of a board of three to run a plant, I representing perhaps the stockholders, another person representing the workman, and a third representing the public, if each one of us had the same responsibility; but under the present conditions I would not be willing to manage a plant unless my vote was the deciding one, as long as I was responsible for the running or continuance of the business.

If the social scientist and if the workman would assume the responsibility for running a plant, I would like to see it. I would like to see an industry run by a labor leader for the benefit of organized labor. I would like to see a business run by a social scientist, in the interest of humanity. You may say—as Dr. Person points out in his paper—that perhaps if we do bring in this element of industrial democracy, do have the laborer share in the forming of policies and reaching decisions with reference to the management of a business,—perhaps he will make mistakes, but what of it? It will develop him. That is fine. But do you know of any owner of a business who is willing to take a chance at it?

The way to work that out is to have some philanthropist who owns a business say: "Here, for three or four years I will place my business in the hands

of such and such a labor leader; and I want to see him try out his theories there, and run that business according to his ideas,—bearing in mind, of course, that he has got to keep the business going and that the plant must be made to run out of the earnings of the business."

I would like to see that tried. I would like to try a lot of the things advocated, mostly by the labor leaders. I would like to try a lot of things advocated by the social scientist. But I cannot. The owners would not let me do it; and if I owned the business, myself, I would not dare do it—if I were absolutely dependent for my livelihood on that business.

But I would like to see it tried. I would like to see someone who has a business set it aside and say: "Here is a business; turn it over to a social scientist and let him run it." And then let him turn another business over to a representative of organized labor, and let him run it. And then have them come together and discuss Dr. Person's paper.

PROFESSOR FELIX FRANKFURTER.¹ (Introduced as a Professor of Humane Law.) I must ask the withdrawal of the intimation that there are two kinds of law, law and humane law. There is law based on facts, and law not based on facts, and that is just as true of the law I am dealing with as the law the Taylor Society is dealing with.

Professor Metcalf said, as I came in, that he would like to have President Person's paper spelled out in detail, and translated into action. He hoped for a contribution of specific instances to illustrate and vindicate the point of view expressed by President Person. No more effective answer to Professor Metcalf's request could be made than the remarks Mr. Hathaway just made, because Mr. Hathaway demonstrated that nothing is more practical than one's point of view and approach to a problem.

It seems to me that Mr. Hathaway has a fundamentally wrong point of view toward industry. Mr. Hathaway has a fundamentally wrong interpretation of President Person's paper. President Person is here to defend his own thesis, but it is such a neat opportunity of driving home the point of view of his paper and the point of my remarks, that I know the generosity of your Society will permit me to be as free as I shall be, and President Person will not be offended if I address myself briefly to Mr. Hathaway's remarks.

Of course, nobody thinks, and Mr. Person the last person in the world, that a factory should be run by a labor leader, and a social scientist and the man-

ager, and that every decision with respect to management should be submitted to the decision of those three men. Nobody thinks that a factory should be run independently by a labor leader, nobody thinks that a factory should be run by a social scientist, and the result of these separate runnings be compared as a basis for judgment. The purport of President Person's paper is a plea for an integration of the judgments of the manager, the workman and the social scientist. You cannot get down to details, Professor Metcalf, until you reach a definite conviction, whether President Person is right or Mr. Hathaway is right, for I believe that those two points of view represent clashes of two sets of opinion.

As I have been able to follow the history of the Taylor movement, it represents even in its short years, three distinct stages. There was the period of pioneer days when Mr. Taylor had to fight for recognition even from those in his own profession. That was the period of great, lonely fighting on the part of a single man, gradually clustering about him such devoted followers as Mr. Cooke and others that are here tonight. Next followed the stage—and it is the usual history of great ideas—the stage where the pioneer movement has become a dogmatic faith, and some of Mr. Taylor's followers became more Catholic than the Pope. That was the period, and it is still lingering on, when the Taylor System was conceived to be some private and confidential kind of a system, an esoteric cult, from which some of the rest of us were excluded, even from being allowed to comprehend it. Whenever any criticism was suggested, it was sometimes intimated and sometimes candidly said that that is beyond the pale of the understanding of all except the initiated.

Those days are gone by. It is a very disloyal tribute to Mr. Taylor to think that his utterances were divinely inspired, and that he himself has said the last word on industrial engineering. No, we are now in the third stage of the movement, the stage where criticism is permitted, the stage where we realize that it is not the science all by itself but only part of a larger field; the stage in other words when "scientific management" must become completely scientific. It must become completely scientific by taking into account the other factors revealed by other scientific studies and integrating them into a unified system. I really do not belong here tonight under any classification. I am not an employer; Mr. Hathaway has seen evidence of that already in my remarks. I am not a workman. I am not a social scientist, because my own profession has still to fight for recognition as a social science.

But the truth of the matter is that the thesis presented by Mr. Person in his paper is the thesis which applies through the whole field of social science. The

nineteenth century and on into the twentieth century was the great period of scientific specialization. Every field of science, and every partition of the field of science, flocked by itself. It is true of law, that the job immediately ahead is to integrate, and to realize that law must draw on economics, must draw on sociology in order to be a living law, to be what your Chairman called a humane law. The same is true of economics. And it is evident that industry must draw on various other social sciences in order that industry may be scientifically conducted industry.

I dislike to think that life presents insoluble antitheses as often as we assume. I was grateful to President Person for pointing out the shallowness of the kind of reasoning which assumes the old antithesis between "theoretical" and "practical." I also dislike Mr. Hathaway's antithesis that the social scientist is interested in something different from what the manager is interested in.

Thinking thus, I find myself distinctly in sympathy with the paper of President Person. His paper marked a distinct movement in the third stage of the Taylor method. I find myself in sympathy except in matters of detail. I need say nothing as to the manager's side of it. I would like to say a word or two as to the comment on the worker's and the social scientist's contribution.

President Person admits that the worker has both a contribution to make and an interest to represent. He says the worker has an "intuitive faculty." He senses certain things which only he can sense. And that sense, that "intuitive faculty," is an element in the problem which ought to be drawn upon. Nevertheless, just as soon as President Person comes to the only way by which this intuitive faculty of the worker can express itself, he is full of hesitation and full of questioning. In other words, just as soon as you come to the effective means of expressing the worker's particular contribution, which is by organization, President Person, naturally enough, raises all the difficulties and presents all the doubts; all the outs, I might say, about the organized labor side of the industrial field.

I hope the time will come, and I do not think it is very many years off (and if, as is inevitable to the minds of most of us at this moment, we are drawn into an international conflict, it will come within a period shorter than any of us dreamed), when there will take place in this country what has taken place already in England and Australia, the countries we know most about: namely, a frank and candid recognition that organized labor, or let me say, the organization of labor, is not a necessary evil, but an indispensable adjustment in the right of industry. And I hope the years are not far away when the Taylor

Society will line itself alongside of thinkers the world over in the recognition of that truth.

I hope the time will come when the Taylor Society will do the thing that manufacturers have done in this community and other cities, namely, oppose—not trade unions as such,—but the mischievous tendencies of trade unions,—oppose not the organization of labor as such, but the misdirection of organized labor.

And for two reasons: The first reason is because, as President Person says, labor to such a large degree is industry. They have a relation to industry which cannot be represented by Mr. Hathaway, no matter how conscientious he is; they have a grievance which cannot be presented by Mr. Hathaway however desirous he is of representing their point of view. It is not within the human capacity of managers, as managers, to represent those outside, diverse interests.

But further, labor represents not only an interest which in itself must be protected; but labor represents a contribution which it ought to make. As a friend of mine put it, labor has a contribution to make other than mere protest; and no one who has studied industry, as it is open to a social scientist to study it, can fail to be struck with the fact that industry in his country has to this day lamentably failed to draw upon the great contributions that inhere in masses of working men and women.

For those two reasons, trade unionism or labor organization must be drawn into your field: first, because it must itself have a share in the field; and secondly, because it has an affirmative contribution to make to the processes of industry. And the same thing is true as to the social scientist.

President Person recognizes that the social scientist is on the mountain top, he belongs to the aviation corps, and can see the situation in the way that those who do the fighting in the daily field of battle cannot see it. But there, again, my emphasis would be a little stronger. I would lay on the paint a little bit thicker, than President Person laid it on, in that part of his paper. In fact, Mr. Hathaway, and managers generally, are themselves social scientists, but too often their science is partial or antiquated. Every manager, every day, acts upon some theory of human nature. Every manager, whether he agrees or disagrees with the claims of labor unions, makes certain assumptions as to social psychology. Every scientific manager when he makes an adjustment as to what speeding up will or will not do, makes a certain decision upon certain philosophical theories.

Now, I say that the manager actually occupied and pre-occupied with the great diversity of detailed problems is not in a position to make those adjustments justly and fully apprised of all the data which should enter into the making of such decisions. I take it that

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the social scientist's relation to industry is exactly the same as the function of the law teachers and the law schools to the administration of the law. The teaching of law that we do out at Cambridge is not the law which in its details is actually enforced by the courts. We, in the leisure of our study, taking a long range point of view, with the natural tendency of the scientist to be more systematic than life itself, are apt to be, to use the conventional phrase, "too theoretical." In other words, we work out a system which the lawyers and judges apply in daily work in the life of the law. In the actual application of the law allowance must be made for the creaking of the machinery. And thus the actual decisions do not square with the best thinking of jurists the world over. The function of the law schools, the function of the medical schools, however, is to supply the body of principles which should be tested and corrected and validated or disproved in the actual administration of law and the actual practice of medicine.

When Mr. Hathaway says tonight that he and his fellow managers alone are responsible for industry, he seems to me to be guilty of what I said at the outset was a fundamental fallacy in his point of view. In other words, he gives "responsibility" a wholly unwarranted and narrow meaning.

Is he alone responsible in any true sense of the word, for an error of judgment made in good faith on inadequate data, from which some social scientist might have saved him,—an error of judgment which may involve the lives of hundreds of people? Is he alone subject to the responsibility of his action if such judgment involves the health not only of this generation but the next? Is that the measure of his responsibility? Mr. Hathaway is undertaking too large a responsibility. In other words, and I take it this is the point of President Person's paper, Mr. Hathaway is one leg of a tripod. The other two are the workman,—and I conceive it to be idle language to think in any other terms except organized workmen; and the social scientist.

Why the social scientist? Because the social scientist is the person who gives his life to the disinterested study of these questions, is the man who represents more than any other person the community to which Mr. Hathaway paid appropriate respect. Mr. Hathaway agrees that his responsibility, when properly analyzed, is three-fold: to the stockholder, to the workman, and to the community. The difficulty with Mr. Hathaway's position, and the conflict between him and President Person is that Mr. Hathaway thinks he can embody in his own person not only the wisdom but also the ability to represent those three interests. I take it that that is an impossible task. The workman must represent himself through unions, not nec-

essarily the present detailed form of union methods, but the frank organization of labor. The public can be represented only by the dedication of the services of the social scientist. Once you recognize that, once you admit that analysis, once you admit the central position of President Person's paper, then it is a question, and of course a very great question, just how those interests are to be expressed in the actual technique of business enterprise. Just what is to be the actual organization of business? Just what are the best methods of business administration?

But I think, fundamentally, before you come to those questions, a conviction must be reached as to the rightness of the general point of view of President Person. Before you come to the question as to who can represent each of the three interests, you must not only believe in, but positively feel that they are three distinct interests, neither superior to the other. You must disagree with Mr. Hathaway—and Mr. Hathaway will forgive me if I use him personally but I think it drives home the point—that the judgment of the manager and the responsibility of the manager precedes the other two or is superior to them. Just how the three can be reconciled is a very difficult question. Some light on it one gets in various directions. Some light on it has been left in a paper by the late Mr. Valentine, since printed in the last issue of the *Quarterly Journal of Economics*. Some light one gets from what Mr. Valentine sought to do in the dress and waist industry in New York, in which he applied his principles of representation.

Those things are the knotty and important details of the problem, but you will not get their correct solution until you admit generously, freely and eagerly the scale of values which are embodied in President Person's paper.

MR. HATHAWAY. May I say a word more in defence of the manager?

I think Dr. Frankfurter has put this to you in a perfectly proper way. I do not disagree with Dr. Frankfurter so much as he disagrees with me. The point I want to make is, that while we agree that there should be those three legs of the tripod upon whom responsibility should perhaps rest equally, that under our present order of things it all rests upon the one leg of the tripod, which is the manager. He may be entirely unfitted for it. I do not for a minute say that the average manager is fitted to bear the responsibility which all three legs of the tripod should bear, but the fact remains that under our present social and economic organization he is the man who has to bear the weight.

The last few words of Mr. Frankfurter I think wiped away any resentment which I might have felt at

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being taken as the target. I am used to be taken as the target and have been, a good many times before, by the owners of business, by the workman, and by the consumer, and it does not hurt me very much, but I wanted to make that plain.

The problem is to work out a mechanism by which we are going to be able to make that responsibility rest in a proper portion upon the three legs of the tripod, instead of resting as it does to-day upon one. That is the real thing; how we are going to do it?

PROFESSOR FRANKFURTER. I don't think there is any clash in the point of view between us. I should like to ask Mr. Hathaway and his fellow managers, for instance, whether they have read, as a starting point, the essay by Mr. Brandeis, on "Business as a Profession;" whether he agrees with Mr. Brandeis' remarks at the Taylor Memorial Service; whether he has read and studied the last work of Mr. Valentine under the dress and waist protocol last year?

It seems to me that once Mr. Hathaway has agreed that the responsibility must be worked out from the three lines, then it is his duty to seek out and be alert for suggestions from every quarter that would help him to meet that responsibility. It is his affirmative duty not to say that it is impossible, but to welcome generously as the spirit of his remarks indicates, suggestions made by business enterprises; he should study what is actually done in England, study what is done by workmen and social scientists as the result of conditions in England; and, above all, from those hints he should try out this needed point of view to industry in a small way in his own plant in Philadelphia, and see how far he can go. And his best answer to his own remarks will be to come here two years hence and say "Gentlemen, I have made a beginning," and he will be able I know to report progress.

MR. HATHAWAY. So far as anything that Mr. Brandeis wrote is concerned I may not have read the particular things Dr. Frankfurter speaks of, but I shall. I will say in advance, however, that anything that Mr. Brandeis says I will agree to. From what I have read of Mr. Brandeis' writings and what I know of Mr. Brandeis, I will accept it without question.

As to trying out the proposition in my own plant in Philadelphia, the only trouble is that I do not own my own plant. I am only the poor devil that has to run it. I own some of it but very little. What I own is a drop in the bucket. I cannot do the things that I want to do as I might jeopardize interests far greater than my own, and that is the position that the manager is in today. That is what I tried to make clear in my first remarks, that the manager may want to do things, he may have the desire to try out things

of this sort, but he cannot do it, the risk is too great. How are we going to make it possible for him—perhaps it is up to him to find the way and make it possible.

In the last ten years during which I have been the responsible head of a manufacturing concern,—which I have done incidentally, the most of my time being devoted to installing scientific management in various plants,—I have desired to try out a lot of experiments but have been unable to do so. That may be my own weakness, and it may not, but the fact remains that no manager is an absolutely free agent.

Dr. Person points out somewhere in his paper one of the weaknesses of the manager to which the speaker who preceded me called attention, that the manager becomes so absorbed in his own limited field that he does not have time and is not permitted to follow up social and industrial development, nor keep in touch as he should, and he gets in a rut. I think that is true. He does get in a rut. And I think the one great advantage of this Society is the fact that it gets the manager out of the ruts. The fact that we can come here and be addressed by men like Dr. Frankfurter and Dr. Person, by men who represent other viewpoints than ours, men who are not up against the daily grand of trying to figure out why it was that a client last year on a business of \$2,500,000, which is 100 per cent more than he ever did before, did not earn a dollar of profit. That is the sort of problem that I have to go up against and I can assure you that it is a pretty absorbing problem because it is not sufficient for me to find out why he did not earn a dollar; but I have got to say how he is to correct that condition and be able to earn a dividend, to earn a suitable amount to keep his plant up to the top notch, to provide for development, and to take care of the ever increasing rate of wages. That is the sort of problem that the management is up against, and it is such an absorbing problem that he lies awake nights over it, and he does not have much time to devote to the study of the broader and more interesting problems. The broader and fresher viewpoint is the thing of great value, that we managers may derive from the meetings of this Society.

MR. JOHN A. FITCH.¹ We have heard a very fine, a very important statement this afternoon—one of the most important utterances that has been made on this subject for a very long time. I was tremendously pleased to hear what Dr. Person had to say.

If I were to criticise the paper at all, I think I should say that he did not sufficiently bring out the defect of the social scientists. Of course, it is rather

¹Industrial Editor of the *Survey*.

hard to know what a social scientist is. There are a great many people who are called social scientists who are too apt to draw hasty conclusions, who are too social and not sufficiently scientific, who are ready to make up their minds on insufficient data, and I would have been glad if there had been more in the paper along that line.

I find myself in some further disagreement with Dr. Person which I can express most satisfactorily by saying that I agree with what Professor Metcalf said about the narrow-mindedness and militancy of labor. It exists, but there is an equal narrow-mindedness and militancy on the other side. Dr. Person brought that out himself when he mentioned the extreme necessity from the manager's point of view of giving his attention to the question of profits. It is no more an evidence of class consciousness on the part of the labor leader to think of the wage than it is on the part of the manager to think first about profits. It is because one is thinking about profits and the other about wages that the clash comes.

The best thing about the paper, is that it carries the conviction that scientific management is going to attack a number of problems that heretofore, so far as the outside public were aware, have lain outside its field of activity.

This is the best statement that has ever been put forward in behalf of scientific management in recognition of the necessity of democratic representation in industry. I do not say that it is the first time that such a presentation has been made, but it is the best and clearest presentation that has come from the society. And if the scientific manager is going to recognize that necessity, I wonder if he will not find that he will get help in doing those things which is now difficult to get done. I wonder if it would not be worth the manager's while to get the workers in the plant to back him in the things he wants to get the directors to let him do. I believe that with a democratized industry it would be possible to effect a compromise of that kind, to the great stimulation of scientific management and greatly to the betterment of labor.

I think, in the second place, that there is great hope in the frank recognition in this paper of the condition that labor has been in,—of that condition which has sent the worker home so weary at night that he could think of nothing but sleep, in order that he might be ready for the work of the next day; and of those repetitious and automatic processes which have dulled the mind of the worker by giving him nothing sufficiently stimulating for a real man to think about. But, as I observe it, the tendency of scientific management is to do that very thing—it wants to intensify the repetitious and automatic character of the operation.

I do not mean to imply that that is a backward step. As I observe what is going on in the field of industry I cannot escape the conclusion that there must be an increasing sub-division of labor. But if we agree that that tends to devalue the job, and to take the spirit out of the man, then scientific management must go to work to find a way by which there may be restored to the man what industry has gone so far to take away.

I was talking with one of your members to-day who said he believed that the working day should be shortened so that a man could get a taste of real life after leaving the plant. I see no other way of escape for him; but if scientific management is prepared to go ahead and work on that job I am sure we are going to get results.

MR. GUSTAV E. SCHULZ. I do not know that it is time for me to say anything, but I have worked in Mr. Hathaway's factory and in other factories and I want to say a few words about how liberal Mr. Hathaway is. I claim that the men in the Tabor Manufacturing Company may run the plant if they want to, and they do run the plant. It is largely a matter of the development that Scientific Management permits; this will be shown later.

I have met a few big men in my life, and I include Mr. Hathaway in those few, and one of the reasons is that he will take anything that anybody has, and if it is good he will put it into effect. And the individual recommending it may put it in and receive full credit; in some cases receive an extra reward.

I went to the Tabor Manufacturing Company as a man from the Middle West, and the spirit I found there was wonderful. I did not profess to know much about Scientific Management; but there were men there who had had ten years' experience in it; and I got hearty cooperation from every individual in that plant. And each individual in that plant is interested in the work that he is doing, knowing that he is a part of it.

At one time I thought Mr. Hathaway was experimenting to see just how far he could go with labor, and I asked him about this; but he pointed out that this was one of his principles, and a principle of Scientific Management.

If we study Scientific Management, we will see it is for labor. I am in Scientific Management because it is for all the people, because it is for labor. I come from a rather radical family in that relation, and I think I can do more for labor as a Scientific Manager than if I were a labor leader.

I want to bring out the point that I would not be in Scientific Management five minutes if I did not think it would be for the benefit of labor and if to-day we

were not taking into account that large element. I might say that five or six years ago, when I first read Mr. Taylor, I thought I might, with a professor friend of mine, write a new article on Scientific Management—Scientific Management in relation to the human element. I read Mr. Taylor a little closer, and I decided it was not necessary to write a book on that; and I still think so. Having had a similar training and development in the shop,—perhaps putting in more time as a laborer,—I believe I can interpret scientific management as Mr. Taylor gave it to us. All along it deals with the human side; it is clear to me that Mr. Taylor brought the human side and ethics into management.

The Taylor System calls for help, all the way through, from individuals. I might say that scientific management is hard to see. It is not a secret; but I believe the average individual must spend years in it to have a clear conception of it. If I may bring out a point by a personal reference, I have spent time in various foundries, machine shops and wood-working establishments; but at no time have I worked in a factory that gives the chance for reflection given at the Tabor factory. I am talking now as a workman. And the same thing is true in any plant that has scientific management. The previous speaker brought out the suggestion that initiative might be killed under scientific management; but that is not the case. We have under scientific management a more gradual series of stepping stones. Under the old scheme only the man whom we thought of as exceptional rose rapidly. Under scientific management it does not take an exceptional man at all. The gradual series of stepping stones which characterizes scientific management's division of labor enables the average man to go up more easily than under the old system.

Coming back to the case of the individual again, when it comes to development, he has the opportunity of studying each job from the bottom to the top. This is true not only of direct labor, but also of indirect labor. If I want to learn the accounting system of the Tabor Manufacturing Company, I can go into it. If I am hired as a storekeeper's clerk, the second day I may if I wish get into the work of the storekeeper. All these jobs are properly written up, with a text for each.

Again much stress has been put on the evils of the repetitive work, which is said to be found under scientific management; but factories doing repetitive work would and did develop without scientific management. If plants with the same product and the same conditions of work prior to the installation of scientific management were compared, it would be found that the plant which has installed scientific management would give the individual a greater

chance for reflection, and in turn be more cultural than the other. This all comes with scientific management and cannot be stopped, as it is a part of it. It is true of the old system that both during its development and after, initiative was killed. Under scientific management an encouraging opening has been made for the growth of initiative.

Mr. Hathaway has pointed out that there is great responsibility in scientific management for the managers. This does not mean, however, that anything is taken from the workman; rather he is helped. As Mr. Taylor points out in his principles, the manager is helping labor in assuming this task. After scientific management has been developed it naturally follows that if labor can take care of any responsibility, it will be given over to labor.

MR. R. A. WENTWORTH. In hearing this paper and listening to the discussions, I have been trying to see if I understand what the purpose of the paper is; and it seems to me that it is contained in the last few paragraphs, where it is said that "the social scientist, because he looks upon the facts of industry from the outside and from a distance, gets the broader view and the larger relationships." That is undoubtedly true. "That is why a group of men standing for the Taylor philosophy of management should welcome—should insist upon—the widest possible discussion of all phases of scientific management," inviting the social scientist to their conferences. Doubtless that is true.

I believe that is the purpose of this paper. I believe that this paper has unqualifiedly proved that point. I believe that in the proving of that point Dr. Person has painted a picture of some things that he has seen, and that that picture has been viewed by different commentators with different degrees of seriousness. Different people have seen different things in that picture. But I have seen some things which to me do not seem true to the facts.

I am inclined to think that while my experience has not been that of a labor leader, if I were a labor leader I should defend the workman from the author's criticism.

My working experience has been wholly in factories, starting in not quite at the bottom, but working through various grades of foreman and superintendent, and spending nearly ten years introducing scientific management, although at present in an executive position.

I have never seen the difference between the workman and managers. Many of the managers whom we know, possibly some of the managers in this room, were originally workmen. Many of them are to-day workmen. Mr. Hathaway says he does not own his

business. He is working, a hired man, as I am a hired man, trying to accomplish results with the same sort of fellows.

I like to think of Jim Mooney, who, a few years ago, was getting fourteen cents an hour, working fifty-eight hours a week, which brought his earnings to something less than \$10 a week; a man sixty years of age who had raised a family of seven children, of whom all of the sons have been through college. All of the sons were professional men, lawyers and doctors, highly respected in their communities, first-class citizens. Jim was a first-class citizen. He was a machine operator, and had one of these monotonous jobs that we sometimes worry about; but he was contented and happy and useful. If his sons had had a little different sort of vision, they would have been managers.

I have known many other workmen, known them intimately, who are of the same sort. I know a man who was only moderately successful in a small business. Through successive illness and deafness he was obliged to retire, and for many years was inactive. Then a man who had confidence in him appointed him to a position of much financial responsibility; not in active management, but where that man was entrusted with the responsibility for many millions of dollars—in company with other men. These other men were rich, financial men, and all of them men of the highest reputation in a large city. The man told me that the principles of doing a large business were exactly the same as those of doing a small business; that the men with whom he was associated in his new enterprise were in no way different from the men with whom he had been associated all his life. They made the same sort of judgments.

A famous consulting engineer who has known hundreds of managers and thousands of workmen says that the manager is in no way different from the workman; that he makes the same mistakes that a \$12 a week clerk makes, that his skill is no greater and no less; that his judgment is just as likely to err at any moment; that he is just as likely to lose his head, for he is the same sort of man.

Now, I may be all wrong, but any picture which presents a different view of managers and workmen does not look true to me. I hope that that may not be considered a criticism of Dr. Person's paper; but it is the result of an experience which I cannot wipe out. So much for the workman and manager.

Of the social scientist I know nothing by experience and only very little by hearsay; but so long as he is truly scientific, as Mr. Fitch has pointed out, he is a safe counselor. To be scientific means to get at the true facts, and to marshal them in an orderly manner. If he does that he will be a big help. If he will get

these things together and look at them from the standpoint of the managers of to-day, and for the good of the future, he will be a help in our counsels, when we get together and look a long way ahead. How much help he will be day by day to Mr. Hathaway and to me, I very much question.

In connection with the value of committees, you know a famous admiral said that one of the difficulties with the navy was that so many things were done by boards, and that a board was rightly named because a board is long and narrow and is wooden.

Another man, I think it was one of the big steel men,—said there was no use in trying to get a thing done by a committee, because you had somebody on the committee who was able, or you did not. If you had a man who was able, you could appoint him alone, and get it done better and quicker than if you appointed a board or a committee of whom some at least knew nothing about it, and who might not get it done anyway. And I think that has something to do with the contention by Mr. Hathaway that one man must be finally responsible.

I cannot take seriously this thought that we are to be governed always by a determination of whether or not it pays. That rule has to be the criterion of a business as a whole over a long period, but one of the great difficulties with our business to-day is that if we keep that thing before us ten hours a day it will never pay. The progress of the world has been made by people who were too busy to decide whether it would pay, but who were occupied doing the right thing. The people who came here and settled these shores were not asking that question. The communities of the west, the people who went there to make their homes, were busily engaged in other pursuits, and they did not ask this question. They were interested in doing something, and they did it, and were well paid for doing it.

We have to thank Professor Jones for his admirable book on "Business Administration," which points out the fact that the leaders in industry to-day require all of the characteristics which have marked the leaders of civilization in all times, or the leaders of the world in all times. That is, courage and honesty and diplomacy and chivalry and ideals. The leaders in industry to-day are inheritors of those qualities, and it is only by the exercise of those qualities that the business world will get anywhere. No one can succeed if somebody is whispering in his ear all the time "Does it pay?" If he knows that he has the right thing, he will work it out, and it will be a success. He may not have the right thing, in which case his failure will stop the experiment. But if you keep whispering in his ear, he will not have the opportunity to find out whether it is good or not. And that

thing is perfectly well demonstrated in many industries which are under the ban of absentee ownership.

I live in an industrial city—Lowell. Reading over some old papers recently I saw the account of a man with a famous name, highly revered in Boston to-day, who went into the wilderness in Lowell and built some mills. All the old mills in Lowell were started between 1825 and 1835, by one group of men. They wanted to make money; they saw the opportunity and went after it. They saw undeveloped water power, and they said that some fellow ought to come along with enough nerve to go out there and cash in. They had the nerve and they went out there and did cash in; and those fellows, having seen the thing with their own eyes and believing in it, went out there into the wilderness of Lowell and made fortunes. Their descendants in some cases—although this is not a general criticism,—their descendants in some cases are sitting in Boston to-day and whispering to hired managers "If you do thus and so, will it pay?" because every six months they want their dividend.

There are very few old, neglected, run-down businesses that can pay a dividend every six months. Somebody with sand has got to come along and see what is needed and say to the manager "I want to spend a million dollars on that plant and do it within a year, and in five years we will have it all back again."

The manager needs that assistance from his owner or financier. Because the banker wants his dividend every six months, no matter what may be the business conditions, no matter how bad, he says "Cut down your stock so that we can pay our dividend." And when business becomes good again he says "Hurry up now and get in a large amount of material." So they pay half as much again as they would have paid when the material was cheap; and they cramp that business and cut down the profits—just to make it pay every six months. What is needed is the personal responsibility of some man with initiative—he may be one of the managers, but preferably he should be one of the owners,—a man who has financial responsibility, who will come to the plant, who will have the vision to see what is wanted, who will have the courage to do what is needed, and who will forego his profit this time for the sake of the profit in the future. He will be paid his price; because he had the business courage and the ability to put things through. That is the sort of man who will succeed; because he has the vision to put aside temporary profit for permanent good.

MR. ROBERT THURSTON KENT. Mr. Fitch in his discussion brought out one point of considerable interest. He stated that it seemed to be the tendency

of scientific management, and of the development of modern industry in general, to force a greater automaticity in the work; that the laborer is confined to one operation in this work. We have heard a great deal about this, and the workman has been made the subject of a good deal of sympathy; but has it ever occurred to you people who have criticised us and criticised managers that many of the working people do not want your sympathy and do not thank you for it? And has it ever occurred to you that they want that very automaticity?

Mr. James F. Hartness in his little book "The Human Factor in Industry" has pointed out that there is a type of mind which is very prevalent in industry that wants nothing but the steady job. The man with that type of mind wants nothing but the one thing to do. If he has nothing else to do but that one thing, and can hold that job for his normal lifetime, he is far happier than if he were given a job which requires thought, initiative and responsibility on his part. I know that is the case because I individually have had experiences along that line.

In my little force I have two girls of just that type of mind. They are good, steady, industrious workers, and I tried to promote them to jobs requiring a little more initiative and a little more responsibility. They would not have it. They threatened to quit if given a job where they would have to work more with their brains and less with their hands. They were perfectly satisfied to go ahead and make their \$10 or \$11 a week with their hands, rather than to get \$15 a week and use a little more initiative.

MR. L. H. BALLOU. Those of us who have attended Taylor Society meetings in the past, and have heard the papers and their discussions dealing with the social and labor problems, must recognize that we owe to Dr. Person a debt of gratitude for the classification of these ideas. I think for the first time he has pointed out the relation which these things bear to each other. He has given things their true value as I have never heard them presented in any paper, and after listening to the other speakers, I feel that Dr. Person's paper is still the meat of the whole thing.

All of the other papers presented in the past dealing with workmen, labor and social science, seem to have resolved themselves into a discussion of the ideal against the practical; rather than ideal against ideal, and practical against practical. Throughout all of this talk, we have been confronted with the same situation which was presented in Mr. Valentine's paper and Mr. Portenar's talk,—the theoretical against the practical. In Dr. Person's paper it seems that things have been given their true value.

What is this intangible something for which we are reaching? There is unquestionably something. Dr. Person has not pointed definitely to it and none of the other speakers have described it. I think, however, that every manager feels that there is a certain something that is necessary; and I believe that the greatest danger lies with the man who is so self-satisfied with his condition that he does not recognize it. He is like the man of whom Mr. Hathaway spoke last night, who was so satisfied that his equipment was in the pink of condition, that he never worried about its maintenance.

I feel that Dr. Person has presented a thought which every manager must recognize as a portrayal of what is inevitable in the future.

MR. RICHARD B. GREGG.¹ I simply want to develop further a suggestion Mr. Fitch made. If industry, through scientific management, is going to become gradually more and more automatic,—if the individual jobs are going to be more and more specialized and machine-like, so that the worker does merely a few monotonous motions all day long,—the worker who cares about something more than that can find his way out by obtaining shorter hours and larger pay, so that in his leisure hours he can live a larger life. In addition to that, if he is given a greater representation in certain phases of the management, he will be able to find expression in that way for his higher interests, and be able to grow and make his views more and more useful to the management and to industry as a whole.

MR. WALTER D. FULLER.² One gentleman has mentioned the fact that there is really not a great deal of difference between the worker and the manager—that we are all pretty human, anyway. Another gentleman a moment ago said that he had frequently found employees who were unwilling to take responsibilities.

I want to say that I have found that true also, but that in most cases it was because the particular worker lacked confidence to take the responsibilities. With some encouragement and advice employees frequently can be induced to take the work.

I remember one case, about seven years ago, where a woman whom I thought was capable of taking executive work refused, and said she would quit. I finally persuaded her to make an effort. She did so but was in tears frequently for several weeks. That was seven years ago. To-day she is the best woman executive that we have in the plant.

¹Valentine, Tead, and Gregg, Industrial Counselors, Boston, Mass.

²Secretary, Curtis Publishing Co., Philadelphia, Pa.

LIEUTENANT FREDERIC G. COBURN.¹ I have a very high appreciation of the value to society of the social scientist, and particularly of the value of the work of the university professor. His detachment from the industrial world makes it easier for him to see things in proper perspective. His ability to treat matters objectively, his knowledge of history, political and industrial, his knowledge of economics, and his trained reasoning powers, enable him to deal with the problems of the industrial world.

I regret to note, however, that many social scientists and university professors have formed the habit of reasoning from incorrect, or at least incomplete, premises; and this habit they should correct. The same criticism is doubtless applicable to managers, engineers, and workmen; but it is particularly applicable to the social scientist, because when he lifts up his voice to comment, criticize, or suggest, he must know that on account of his detachment he is particularly liable to be accused of being a "theorist," as if the word "theorist" were a vile epithet. Knowing that such criticism is bound to be forthcoming, it would be wise for him to make sure of his facts. If he should submit his statements of fact to those in the industrial world who are in a position to know what the facts are, and get their approval of the statements, of fact and include such approval in his statement of his premises, he would be in the position of having complete and accurate facts, and could then stand on his reasoning; and the social scientist has no cause for conceding place to anyone else, in respect of reasoning powers.

The Taylor Society, representing the science of management, should be particular to see that the statements of facts in its papers are correct. It is one thing to disclaim responsibility for statements of fact, and another thing to take responsibility for statements of facts; and I suggest that a way to do it be found.

MR. WILLIAM C. DART.² The tendency of the advocates of any one movement is to claim a cure for all ills. In medicine the specialist is, however, beginning to admit that the old-fashioned general practitioner, provided he was an able man, had his place in the world.

What I am getting at is that in all things the human element, or the soul, is the important thing. Each group, the manager, the workman, and the social scientist, is apt to believe that his work is the most important.

The relative position of the manager and the workman in the last twenty-five years has become more and more complicated, and through this very compli-

¹Naval Constructor, Navy Yard, Boston, Mass.

²President, Rhode Island Tool Co., Providence, R. I.

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cation they have grown farther and farther apart in their understanding of each other's problems.

The responsibilities of the manager have increased, for in addition to the problems of manufacturing and merchandising, he has been surrounded by laws passed by the various states and by the Federal Government compelling him to assume expenses and to pay taxes which twenty-five years ago would not have been countenanced. In addition to this, laws have been passed prohibiting him from making any agreement with his competitors as to selling prices and requiring that competition shall be open and free. His position to-day is not only one of great responsibility, but from his very position he is more or less conspicuous in the community, and the community knows of the results of his management. In case of failure, it is extremely difficult for him to obtain a relatively good position.

The workman, on the other hand, takes no responsibility and is free to come and go as he pleases. During the past five or six years he has availed himself of his freedom, often leaving his employment with no previous notice that he was going to do so. There seems to be a complete misconception on the part of the workman of the fundamental principles of economics, and as a class they seem to have an idea that the corporations have a fixed and stable income, and that the only obstruction to the workman getting increased wages is the will of the manager.

The only hope that I see for industry in the future is the education of all. The manager must study the workman's point of view and be able to see the problems through the workman's eyes. The workman, on the other hand, must have a general knowledge of the varying elements of the manager's problems and must have due respect for them. The social scientist has his work cut out for him in the problems of the manager and also of the workman and in bringing the two elements together.

For this reason I think the programs which have been carried out by the Society during the past eighteen months have been most wisely planned.

DR. PERSON. [Author's closure.] Your discussion of my paper has been so generous, it has reached out into so many fields and made headway towards solving so many problems, that it is not easy for me to reply. It will help me some to start my rebuttal with a confession; then when that has been made, I will take up *seriatim* some of the things asked me, closing finally with remarks of a more general character regarding industrial philosophy.

The confession which I wish to make is simply an explanation as to the limited but quite serious purpose which I had in mind in preparing this paper. It had

been a long-standing, self-imposed rule of mine not to address or participate in discussions of this society. But late in the final session of the New York meeting, it occurred to me that the occasion had arrived when I could properly break this custom, and by an address of the kind presented this evening nail once and for all to the mast of this society a flag already raised by its membership. I wished to make secure as the eternal standard of this society the policy of drawing out the most generous and hospitable discussion, from every point of view, of the problems in which it has a particular interest. I am convinced, after listening to the discussion of this evening, that this Society can never become narrow in its views.

In preparing this paper, therefore, it was not my primary purpose to raise large questions of industrial relationship. My purpose rather was to bring to your attention for intellectual justification a principle that any society having to do with problems of industrial mechanism and human relationships is bound to adopt; and which in practice you were already following instinctively. Any such society must in organizing its discussions be most generous in inviting and most tolerant in receiving every possible point of view. I wished to emphasize this point by an analysis, to prove why each is essential, of the three points of view usually presented in the discussions of the society. In making my point, however, I could not avoid raising a number of large industrial questions; and it has turned out that the consideration of these questions has been the most interesting part of the discussion.

I was asked by Professor Metcalf whether I believed the disadvantages which I attributed to the manager are inherent in him and in industry. In answer to this question I would say that it depends upon what one means by inherent. We must remember that we are now speaking of large groups of individuals. We know of individual managers who seem to have forced themselves from all four of the disadvantages enumerated, and a larger number who have freed themselves from part of them. I believe also that managers as a group are experiencing a favorable evolution with regard to these limitations. But I fear that we are likely to err by attributing to the whole group the rate of change which we observe and admire in a conspicuous few. For the group the change is by small increments, and I know of no data which justifies our concluding that the group will ever be free of them, or which justifies us, in our generation, in reasoning on the basis of any other assumption than that to a considerable degree these disadvantages will continue to exist.

In connection with the discussion of the disadvantages of the manager, the question was raised whether

it is sound psychology to interpret business, and particularly the problem of human relationships, from the point of view of the necessity that the manager should earn profits.

I believe sound psychology demands that the discussion must be primarily from that point of view. In this particular industrial régime, in which nearly every industry represents property ownership and corporate organization, in which ownership is widely scattered and in which the manager is merely a trustee,—an industrial régime which will not change rapidly,—it is absolutely necessary that the individual manager have regard for profits. If he does not, he will, as Mr. Hathaway said, not only cause his principals to fail in business but will also cause himself to fail in his trusteeship and in reputation; he will cease to be a self-supporting, self-sustaining individual.

But I believe also that it is sound psychology for the social scientist to inject discussion from the point of view of a régime of no profits. That serves as a corrective to too extreme or narrow a point of view on the part of those who must assume the necessity of profits in their discussion; as a corrective to their failure to observe an evolution which is modifying the esteem in which not only profits but also individual ownership of property and even individual rights are enjoying in human opinion. In fact it is the thesis of my address that the views of the manager, the workman, and the social scientist are the views of functionalized specialists in reasoning, each of whom assumes different premises or emphasizes the same premises differently in his reasoning. It is the fact that we welcome such different points of view that gives the society vigor.

With respect to the advantages of the manager it was asked whether I did not attribute to him too great individual ability. I trust I am not accused of attributing to every manager the ability I attributed to the average of the group. There are individual cases of pathetic narrowness of mind and ignorance of agreed-upon industrial facts. The questioner evidently had one such case in mind. I was referring to the group of managers and of their average ability. I believe that the manager, through his intellectual ability and through accurate knowledge of industrial facts, is better qualified than any of the group I mentioned to render sound opinions concerning the immediate practicability of proposed industrial policies, and is well qualified to render judgments concerning industrial tendencies. No one of my acquaintances has sat for an evening in the company of able business men and not come away with such an opinion.

The suggestion was made by one of the speakers that he does not agree with my statement of the two limitations of the workman: first, the narrow-mindedness resulting from his limited experience; and, second, the militancy of his point of view.

I simply join issue without trying to argue further. My purpose with respect to manager, workman, and social scientist was to pick out certain high lights and not to make my analysis so exhaustive that we would lose ourselves in the consideration of minutiae. I endeavored to pick out what seemed to be certain great advantages and great disadvantages pertinent to each, and to allow you to add to them, *ad infinitum* as you wish. Now I picked out the two disadvantages which seemed to me the great outstanding disadvantages of the workman. I was not thinking of the exceptional workman. I have met him. But I was thinking of the average workman, not especially informed concerning the industrial mechanism, industrial process or industrial policy. He has not the breadth of view possessed by the manager or the social scientist. I will not deny the intellectual keenness or mental power of the workman, but merely the lack of information on his part regarding what is essential to an understanding of the industrial mechanism. I believe that if we are considering the more immediate influence of a policy, let us say, tomorrow, or next year, it is probable that the workman will not reason very accurately on the basis of the facts. At the same time, if we want to know what will be the influence of a certain course of acts in the long run, without limiting ourselves to any stated term of years, I do not know but what the workman may have certain faculties developed out of his experience which will intuitively tell him something near the truth as to what the results will be.

Professor Metcalf suggests that we are not apt to get very far as a result of our discussion of these problems. I think, however, that it is absolutely essential that we make the effort. Experience teaches all of us that to make real progress with a new movement we must be frank in pointing out both what we believe to be conspicuous advantages of that movement and what we believe to be conspicuous disadvantages. I wish to say that I was ready to discuss all phases of this problem with representatives of labor, if they had been here this evening in accordance with arrangements; and my greatest regret is that no representative of labor had a part in the discussion.

The question has been asked if there is any owner of a business who would be ready to take the chances of placing responsibility for the success of his business on any workman or social scientist. The answer is both "Yes" and "No." Yes, because we know of

conspicuous cases where this has been done. The most conspicuous case of all has been named here tonight, a business concern which is usually named when men talk on this subject,—an institution whose exceptional greatness stands out like the tallest peak above the plains. But this particular success was fathered by men of extraordinary vision and largeness of heart and mind. The founders of this business had extraordinary capacity for choosing men to help them and for making men work. Not only were these unusual capacities combined in one leadership; but, in addition, this business was begun under circumstances such that its founders were freer to do with that business as they saw fit than is true in the great majority of cases today. The ownership of the business is now spread among many persons; but the initial advantage due to rare ability on the part of the founders has been preserved through the development of this ability in the institution itself. The momentum which was early acquired will carry along with it anything that the leaders want to do, or anything that their people want to do.

But in other cases the answer is "No." Ask the manager of any plant at which the point of view has been the conventional point of view, and where the ownership is widely scattered. You will not find that manager prepared to carry out any such great things as have been carried out in the above-mentioned plant, which is so often cited above all others as an illustration of what we think is possible of attainment in the future.

It was maintained by Professor Frankfurter and also by one of the later speakers that I emphasized too much the outs of the workmen's organization and point of mind. I think it is necessary to emphasize the outs. It has lately been our experience that the two particular weaknesses of the workman's position to which I referred in my paper have stood in the way of progress more than almost anything else. I am inclined to think that it is these two particular disadvantages that have more than anything else held back the people who are believers in and workers for the Taylor System of management. I wrote those two paragraphs when my mind was fresh from a reading of Congressional discussions regarding anti-efficiency legislation. The speeches, of course, did not express the real views of members of Congress, for the words had been put into their mouths. I advise you to read those speeches in the Congressional records, and then tell me if I am not justified in stating that the narrow-mindedness and militancy towards which labor tends is a serious disadvantage.

With regard to the weaknesses of the social scientist, not much has been said in this discussion; perhaps because it is thought that it is to this class that the

writer of the paper belongs. I think, however, that Mr. Fitch made a good point when he remarked that I did not say enough about this subject; and I am glad that he pointed out one defect to which I had made no reference—namely, that men who are called social scientists are often too social and not enough scientific. If I ever write the paper over again I shall mention that. What do we mean by this weakness of being too social? Certainly not weakness in analytical ability, or in logical power; the logical powers of the social scientist are probably as good as those of any of us. But correct reasoning depends not merely on logical power; it depends also on that analytical equipment which includes the ability to choose correct premises. I believe, therefore, that Mr. Fitch has made a good point; for the premises of the social scientist are not always correct. Although he may undertake difficult historical research in the hope of getting the facts more accurately than anyone else, when it comes to actual living problems he frequently starts on a false basis.

I wish by way of closing to refer to Mr. Gregg's question: Where does the stockholder get off? I might have had a fourth part in my paper entitled "the stockholder." As a matter of fact, however, the manager was in my mind standing for the stockholder; and I was discussing the stockholder when I was discussing the manager. There was, however, a good point in that question; and it could well be brought out in a paragraph, if the paper were to be presented again. The manager is not free in his relations with his stockholders, and an individual stockholder is not free in his relations with his fellow stockholders. We all know that group action is a difficult thing to organize, and operate so as to produce results. And where we have concentrated organization and operation, combined with widely scattered ownership, it is very difficult as a practical proposition to get a common point of view, to get joint action and to make things move.

I have two things to say about this proposition. First, I am inclined to sympathize with the manager. When Professor Frankfurter got through, I thought I should have to get up and defend Mr. Hathaway; even although Professor Frankfurter was apparently criticizing Mr. Hathaway for not agreeing with himself. But after Mr. Hathaway and Professor Frankfurter had had their several interchanges of views, they came so near together that I realized I did not need to defend anyone. I have great sympathy for the manager; I conceive that he is compelled to recognize frankly his situation, I do not disagree with Mr. Hathaway there. But the manager should do what he can to educate and convert his associates. Perhaps in one concern it cannot be done by a mana-

ger in that manager's lifetime; but a start may be made. In another concern perhaps it can be accomplished just within the limits of a manager's lifetime. And in a third concern, perhaps the several attitudes of mind of the stockholders or their limited number, perhaps the extraordinary virile forcefulness of the manager alone, will enable him to bring about in a reasonably short time the evolution which he has in mind. But as soon as one manager in one concern does it, it will be easier for the other manager in other concerns. Each of these successes will have a powerful force on the other, and the movement will progress; for every manager who believed he could not do it will start trying to do it. But I have a great sympathy for the manager and am inclined to take Mr. Hathaway's point of view, rather than the point of view of those who differed from him.

Again as to the stockholder. I will admit that he must have his profits. I am not denying that there may be worked out in the long run some sort of industrial régime that will negative that statement. But within a measurable time, within the time of those managers who are now asking "What can I do about it?" I think a manager's opportunities will be limited by the stockholder who must have his profits. At the same time, however, I consider the stockholder to have a great moral responsibility. I consider him in the light of a trustee. Audiences have been becoming more sympathetic to the point of view that the manager is a trustee; but they have assumed that the stockholders still possess absolutely individual ownership. But I push the point of view back one step further: I can see the stockholder just as much a trustee for society as the manager is said to be, and I can conceive of his running the business not as though it were his own property, but as though it were his responsibility to convince the mass of his associates—just as it is the responsibility of the manager to convince his stockholders. This all works together and you will be surprised at the great result which can be worked out from the sum of little advances of this kind.

I have tried in this paper to inspire in the Taylor Society one of the ideals which by right should belong to it, as the representative of what I conceive to be the only true scientific management—that which is presented in the principles of Mr. Taylor. The principle which I have striven to advance as a phase of scientific management is the thought that this society should nail to its flag-pole a flag which would at all times stand for the widest and freest possible discussion. I once had a paragraph in my paper in which I said that, so far as my observation had gone, I thought that the managers of the Taylor plants had, as a group, fewer of the disadvantages than were pos-

sessed by the remainder of the managers throughout the country. I cut that paragraph out because I thought it would not be good taste to pat ourselves on the back that way. But I was at a meeting a year ago at which were discussed the problems of the supervision of personnel; and a man who was not connected with the Taylor plan of management, but who had been making observations in regard to personnel in industry, cited three cases which were outstanding examples of good industrial relations. Mr. Bloomfield will remember the occasion. The plants named were the Clothcraft Shops, the German-American Button Company, and the H. H. Franklin Manufacturing Company. You will find that people who are discussing this problem of human relationships will frequently cite, even though they don't know the type of management the various plants have, a larger proportion of plants operating in accordance with the Taylor management, than plants operating under other methods.

But why have I not pointed out a practical way of accomplishing these results? Mr. Metcalf thinks it is time for action. I think, on the contrary, that it would be a dangerous and wrong thing for him or for me to go into such an undertaking at this time. I have made the point that changes in the industrial organizations come in a voluntary way—in very small increments of change. And then there is another principle of evolution which I did not state in this paper, but which is implied; that in evolutionary development growth proceeds from within.

If, now, such a paper as I have presented and many other similar and better papers which could be presented, should set the managers of the country to thinking; if each one should convince himself that the principles of which we have been speaking are correct and ask himself what he can do, and set about doing that thing; then a concrete mechanism will work itself out, and it will be a concrete mechanism built up by small increments which change as the environment itself changes. The movement will grow; because it is a growth from the then management and the then industry; and the machinery will not be an artificial machinery that some social scientist, standing on a mountain peak if you please, and watching broad tendencies, has worked out. Let us think rather of a scout located on the mountain top, who sends down word to the captain of the troops just how to proceed, but leaves it to the captain to decide the details of the manner in which the troops themselves should go. Let the captain decide the course to follow after taking into consideration all the information he can get, including that from the scout on the mountain.

DIE BRÜCKE

A PLAN FOR THE WORLD ORGANIZATION OF INTELLECTUAL LABOR

BY HORACE B. DRURY¹

Some time ago the writer was asked to prepare for the BULLETIN OF THE TAYLOR SOCIETY a sketch of an interesting efficiency movement started in Munich in the spring of 1911. Circumstances delayed the appearance of this article; and in the interval which has now elapsed, America has definitely and irreconcilably aligned herself against the dominant characteristics of the German system. Intensive though our military effort has now become, it is, however, just as important as before to inform ourselves regarding tendencies in Central Europe. In the case of the particular movement with which we are now concerned, it is a satisfaction to know that it represented a tendency which was opposed to the forces in Germany which made the War; almost as much opposed, in fact, as were we ourselves.

The organization of *Die Brücke*, may be spoken of as an efficiency movement; yet this society never discussed the speed of machines, the wages paid to labor, nor problems of trade or finance,—at least not as such. The interest in this undertaking lies in the fact that it was an attempt to apply to artistic and intellectual work principles which would conserve and multiply the world's heritage along these lines. Most efforts to accelerate the higher work of the world have met with a cold reception among the initiated; perhaps because of a notion that the would-be organizer was reaching above his place, that he did not understand the basic principles of success in the field which he had undertaken to remold. In the case of this society, however, such a suspicion could not be entertained; for the project was fathered by none other than William Ostwald, long known as one of the great men of German science. A master in the field of physical chemistry, and a prolific writer on scientific and philosophical subjects, Professor Ostwald was, in 1905, the first exchange professor from Germany to the United States, being assigned to Harvard and Columbia Universities. In 1909, he was awarded the Nobel Prize in chemistry. Of recent years, however, he had been turning from his more specialized fields to the larger problems of scientific and social organization. Here, too, his success was well marked; so much so that H. G. Wells wrote of the "Germany of Ostwald," meaning thus to designate that whole complex of modern organization of which he regarded Ostwald as the chief exponent.

In a pamphlet written by Ostwald and called *Die Brücke* is to be found the best statement of the pur-

poses of this organization. After explaining why he thinks that the time is ripe for the formation of a world organization which would bridge over the gaps between workers in different fields and in different countries, Ostwald lays down as the fundamental basis of all intellectual organization two simple principles, namely the division of labor, and the cooperation of labor. There must be specialization, he says. But, on the other hand, there must also be a working together which will make it possible for each specialist to get the full value of the work which others are doing. Each worker must have access to all data which he needs—and he must be able to get this without difficulty or formality.

As the name indicates, it was largely to carry out this second half of the program, to bridge over the gulfs of ignorance, inertia, and prejudice separating different workers in different countries that *Die Brücke* was formed. Its first enterprise, Ostwald said, would be to form a central exchange for all the mental work of the world. *Die Brücke* would form the fullest possible directory of all specialized intellectual organizations as they already exist all over the world in extremely great number and variety. There would have to be full enough details as to statutes, membership directories, completed work, etc., so that the person in search of material would get from the exchange, if not the information itself, at least the precise places where he might obtain the information.

A second task upon which Ostwald himself set out immediately was the standardization of the tools and mechanism for intellectual work, especially that material equipment by which thought is transferred from one place or person to another. The sizes of books, pictures, and printed matter of all kinds at present show a complete lack of system. There is a waste of space on the library shelves, in the portfolio, and in the envelope because things that are used for the same purpose are not made of the same size, and the thing that is to be stored away has no fixed relation in size to the container or space into which it is to be put. So Ostwald devised a series of standard forms for length and breadth, based on the centimeter and advancing from the smallest to the largest magnitude according to a formula which would give both utility and beauty.

Another plan involved the establishment of a color atlas, which would present objectively all possible colors, according to tone, brightness, and purity, on the basis of scientific principles. Thus there would be a suitable international designation for every color

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tone. Yet another important goal was to be the development of an international auxiliary speech. These were the chief examples given of the sort of undertakings on which *Die Brücke* would first venture out, it being assumed that as rapidly as it became possible one new enterprise after another would be taken up.

From the material in the New York Public Library and the Library of Congress it is impossible to tell whether Ostwald was himself the originator of *Die Brücke* or whether he came in to sponsor and develop ideas for which others were trying to find a means of expression. The earliest publication on the subject was a monograph issued in May, 1911, by an organization committee and entitled *Die Organisation der geistigen Arbeit durch Die Brücke*. The authors are given as K. W. Bühner, who is said to have originated the plan, and U. A. Saager, who put it on paper. The monograph contains 177 pages and goes into the subject of the organization of intellectual work with the philosophical thoroughness and orderliness which characterize the German method.

Though *Die Brücke* was not organized until June 12th, 1911, the above mentioned treatise, as well as the leaflet by Ostwald, are counted among the numbered publications of the society. In 1911 and 1912 at least thirty-three similar pamphlets were issued, of which twenty-two are to be found in the Library of Congress, and a somewhat similar collection in the New York Public Library. These are with only a few exceptions written by Ostwald, Bühner, or Saager, and cover in greater detail the development of the ideas which have already been mentioned. Besides various publications dealing with the matter of standard forms, there are taken up such topics as a central collection of music, the relation of *Die Brücke* to the artist, the organization of printing, the Dewey Decimal system of classification, the mission of advertising, the function of the poster, and the problems of social foundations and bequests. One number furnishes a rudimentary guide to the world's leading libraries, and another discusses the development of *Die Brücke* as the world exchange.

The New York Public Library also contains some five small bulletins which constitute the first nine numbers of *Brücken Zeitung*. These were issued in 1913 and constitute the latest available publications. They are a record of the progress of the organization, which Ostwald declared was marked by greater success than in the case of any other movement with which he had been identified.

In 1912 it was announced that Ostwald had endowed *Die Brücke* with a hundred thousand marks taken out of his Nobel Prize. The same year the autographs of Ostwald and eighteen other leaders in the

movement were published. They included citizens of Germany, Belgium, Austria, Switzerland, Denmark, and Sweden. There were bank directors and publishers, members of the Reichstag and the Austrian parliament and a government minister, representatives of great business enterprises and university professors—including several winners of Nobel Prizes. One of the nineteen was the Honorary President of an International Peace Bureau, and editor of the yearbook of the Danish Interparliamentary group; another was the General Secretary of the International Bibliography Institute of Brussels, as well as of the Central Bureau of the International Union.

One of the last official actions of this group seems to have been the passing of a memorial petitioning the Emperor of Germany to maintain the peace. This was in 1913. That *Die Brücke* was founded in the belief that the world had reached the stage of internationalism is clearly shown in Ostwald's first publication. He maintained that there had developed in the last century a unity of mankind that made the entire world interdependent. In no portion of the earth can anything happen without affecting all the rest of the world, either for good or for bad. He refers to the increased unity of the world as evidenced by the growth of labor unions, employers' associations, money exchanges, and trusts—these last grown mightier and mightier, so that they have come to reckon with the market of the entire world. In the political realm, the state no longer satisfies all needs, but international coöperation and agreements are coming to the foreground. Ostwald urgently recommends the adoption of a general arbitration treaty, not only with the United States, but also with the other states with which the United States was then concluding such treaties. These facts are significant to-day as indicating that the better part of scientific Germany had at that time little real sympathy with the discordant designs which have since marked the conduct of the German government.

It should be observed that the keynote of this ambitious effort to organize and increase the efficiency of intellectual work was to treat first the simplest and most elementary processes. The first principle was to take away from the more capable workers of the world all the mechanical and unprofitable work that could either be eliminated or turned over to persons who might more fittingly assume the responsibility. Thus the abler individuals might give to the world the full value of their expert and originating powers. Step by step *Die Brücke* was to pass from the simpler to the more complex problems, and from the more general fields to those more specialized. But the overcoming of the humbler difficulties would always be the most

valuable part of the work. The plan of *Die Brücke* is thus the very opposite from that of most scientific and research institutions.

While *Die Brücke* could have been interested in nothing but the negation of war, this organization has nevertheless had to suffer under the general catas-

trophe. In a letter to Mr. Morris L. Cooke, written after the War had started but before the United States had entered, Ostwald declared that the project had had to be abandoned, and would have to stay abandoned for ten years after the War.