attitude of cooperation, which has in it promise of integration, in the following words:[1]

> There is occasion for grave concern that the declarations of organized bodies representative of finance, ownership and management are as a rule limited to generalization such as "less government in business and more business in government," without supporting studies showing why more government in business has come about and how less government in business is to be achieved. There seems to be an absence of historical sense of the reasons for the present situation and of constructive imagination with respect to the way out. There is apparently little concern on the part of ownership and management that the way business has been managed—with respect to controlling motives and practice—is probably the cause of the situation which business feels to be so unsatisfactory, and that the remedy undoubtedly lies in the way business is going to be conducted—again with respect to controlling motives and practice. Experiencing the ill effects of an unfavorable regimen, ownership and management disregard the proved methods of diagnosis, prognosis and prescription and cry out for a Coué to lead them to health through a formula.
>
> On the other hand, certain recent declarations of organized labor give evidence of a thinking about the reasons for the present situation and a way out. Among many declarations and resolutions adopted at the October convention of the A. F. of L. at Portland, Oregon, was one entitled "Industry's Manifest Duty." One may not agree with all in that declaration, but one must recognize its substantiality, and acknowledge that it presents basic principles of a positive program of cooperation with ownership and management. Its constructive vision is evidenced by the fact that it recognizes that the ills of industry are a result of the habits of industry, and that the cure for those ills must come from a change of habits.

The Society stands for the philosophy, principles and technique of scientific management; Mr. Gompers opposed these in an earlier day; yet we appraise him as a great leader and industrial statesman. While we believe Mr. Gompers was in error in his earlier attitude and failed to seize promptly a great opportunity for promoting the very industrial welfare he sought, we have thought none the less highly of him on that account. Even great men are human and are privileged to err. What great leader has not made his mistakes? And possibly it may prove to have been well for scientific management that the Federation erred in its first judgment. Scientific management in its first expositions was explained too narrowly. Even its advocates failed in those days to appreciate all its implications. The fact that they were put on the defensive may have been good for them and for it.

[1] *Bulletin of the Taylor Society*, Vol. VIII, No. 6, December, 1923, p. 206.

At any rate, the files of this Bulletin prove that the advocates themselves, in sustained efforts towards clearer exposition, have learned something more about the ideals of their great leader and about scientific management. If that which is opposed has something basic which meets a great human need, it has no cause to fear opposition; it is refined and strengthened by honest, intelligent opposition. From that point of view the Federation's opposition has probably helped scientific management—certainly more than has the opposition of certain classes of ownership and of management which has been less reasoned. And if that which is opposed has something basic for industrial progress, it gradually wins those who honestly and reasoningly oppose. The Federation apparently is gradually being won. In an article in the *Annals of the American Academy of Political and Social Science*, September, 1920, the recognized spokesman of organized labor in this country—Mr. Gompers himself—took an unequivocal stand for greater production as being in the interest of the wage earners. It was a momentous decision:

> Production is the great world problem of today.
>
> We cannot escape the problem of production. We must meet it and come as near to a solution as may be possible, or we shall suffer.
>
> We are face to face with no simple problem. No magic will remove the tangle.
>
> Mere expenditure of more muscle power will not bring us out of the difficulty.
>
> It is the intelligent coordination of effort and the proper reward of effort that we must arrive at.

When the time comes, as come it surely will, when organized labor openly accepts scientific management as *its* means of achieving industrial welfare, labor will have made the next and the most momentous decision looking towards Mr. Gompers' ideal of "a higher, fuller, finer life, with more of freedom and more of self-expression for all."

Mr. Gompers began his constructive work on behalf of labor with the beginning of large-scale industry as we now know it. He was a pioneer solving new problems of adjustment in a pioneer way. A great "vigilance committee," watchful of the interest of labor, is his monument. But Mr. Gompers himself came to see that conditions, problems, mental attitudes, opportunities and responsibilities had changed—that orderly government in industry is now the goal. We hope that the new leadership will do the work of its day as well as Mr. Gompers did the work of his day.



## Scientific Management Can Double Wages[1]

NOT since as a boy I read Robinson Crusoe have I been thrilled by a story of adventure as when recently I read Copley's life of Taylor. Frederick W. Taylor was not only a great man and a great pioneer; he was a great benefactor of the human race.

As an economist I would stress particularly the value of scientific management to labor. When the time comes, as come it must some day, when scientific management is no longer the precious possession of a few only; when the works of its imitators and betrayers who, a few years ago, gave it a black eye, are no longer confused with the genuine article as exemplified by Barth and members of this society generally; when the control of industry is more fully in the hands of those who are not concerned in getting rich quickly but in the slow substantial progress which scientific management necessarily implies; when as a matter of course scientific management is as universal as the telephone or newspaper—I have little doubt that the welfare of labor will be double; in short, that real wages will be twice as high as at present.

In saying this I have no reference to the direct and immediate increase in money wages to the lucky few who work under scientific management on a rational system of task and bonus. I mean something far more fundamental though indirect. Even if it were possible for employers at first to "hog" all the savings accruing from scientific management and refuse to give any bonus to labor, in the end the advantages would percolate throughout society just as today we all get the advantage of the telephone despite the enormous returns to the few original investors. In the end labor gains the most from so-called "labor saving devices." Increased production means simply increased income to society, and the wage earner as a class usually profits the most in the end. Scientific management by which the bricklayer doubles or quadruples the number of bricks laid, reduces the rent of brick houses. Scientific management which makes more shoes and clothes decreases the real cost of shoes and clothes to all. Real wages consist of shoes and clothes and shelter and food and the other things which labor consumes. Any device which facilitates their production tends to increase real wages.

This seems extraordinary to those who have not followed scientific management, just as several years ago the statement of one of Mr. Brandeis' witnesses seemed extraordinary when he claimed the railways of America could save a million dollars a day by scientific management. But the proof that scientific management can more than double average productivity now fills management literature. And we should take account of the incidental inventions to which scientific management leads. The Taylor-White high-speed steel enabled the United States during the war to turn out five times the munitions that it otherwise could. And yet we have only scratched the surface of what scientific management can do.

The Taylor Society has the great mission of improving the general well-being of mankind by which labor as well as the rest of us can enter the promised land flowing with milk and honey at a rate double the present flow.

As Mr. Babcock, one of our greatest practical exponents of scientific management, has said this evening, the universities can play a part in this great movement. Engineering, though originating in industry, had to pass through the university to receive its highest scientific formulation, and then the universities handed back to industry thousands of educated young men to become engineers; likewise today, industry, in which scientific management began, needs to hand over to our universities the task of educating young men in Taylor's principles. My own university, Yale, is making a start in this direction, as have several other universities like Harvard, Pennsylvania and Dartmouth. Our progress will be slow because impeded by prejudice, ignorance and indifference, as progress ever is and must be. The worst tragedy is the opposition of so many misguided labor leaders who hold a philosophy the opposite of Taylor's and insist on limitation of output and reduction of the flow of milk and honey. "Making work" in this way reduces real wages to the average laborer.

But employers before they blame labor for ignorance and prejudice should first take the beam out of their own eye. For they have set bad examples in creating artificial scarcities and seeking "protection" from competition, to say nothing of angering labor by cutting piece rates and robbing

[1] Abstract of an extemporaneous address by Irving Fisher, Professor of Political Economy, Yale University, at the dinner of the annual business meeting of the Taylor Society, New York, December 4, 1924.