opening for a woman on the day shift by the transference of a woman from the night shift, and to fill every vacancy on the night shift by a man. I have demonstrated in one of our mills that this is a practical suggestion, and have given instructions that each manager carry it out in the other mills.

What would be accomplished? A reduction in working hours without a reduction in pay would mean greatly increased efficiency in an industry working at 65 per cent productive time, with operatives living under more normal conditions with more pay and more leisure and therefore better standards of living. It would also help in part to decrease permanently the difference between production and consumption.

Professor Madden's idea is interesting. I am not enough of an economist to know whether the information given out might not stimulate competition instead of controlling it, as Mr. Madden hopes. Perhaps before these sessions are over some of the economists and students who are here can give us some ideas on that point.

In the meantime, if Professor Madden can put his suggestions into proper form to be endorsed by the members of the Taylor Society and the participants in this meeting, and if other concrete suggestions can be formulated and sent to the President, I am sure they will carry weight and help to put the Taylor Society on record as a constructive force in this present situation. It seems to me that the papers presented this evening and the suggestions thrown out by Mr. Chase and others may make of this evening a very fruitful occasion.

I hope that we may be able to transmit these constructive ideas in such a way that they may be helpful to the conference in Washington. The one thing that I fear about this Washington Conference is that it may turn into a mere gesture, with only a soothing effect for the moment. And this will be the result unless individuals and organizations like our own do something constructive. You know the men who have been called as advisors. They are for the most part presidents and presiding officers of large industrial organizations, and those of you who have had experience with large industrial organizations know that very frequently the type of man who is president is quite without new ideas and courage. In looking over the list it seemed to me that there were only a few men who might have a combination of ideas and courage. Therefore we as a society in conference assembled on these problems may be able to make a real contribution at this important and critical time.

C. B. Hammond.[10] The discussion this evening has seemed to me to assume that equilibrium is generally desired. If I am right in this I am afraid that the assumption is not wholly correct. Equilibrium is the ideal principle of philosophers, scientists and engineers, but business has become what it is in the absence of equilibrium. Americans are traditionally traders. They are interested in speculative profits; as individualists they are fond of what has been called the unearned increment. Fluctuations are fruitful sources of profit to them and always have been; and this interest is not by any means confined to Wall Street. There may be times, and the present is I imagine one of them, when business men as well as philosophers and scientists feel that equilibrium is most desirable; but I think a great many of them would not like it all the time.

Hudson B. Hastings.[11] I think this problem of equilibrium ought to be broken down and the different types of disequilibrium considered. First, there is that maladjustment between different types of industry which has resulted in individual industries being grossly overdeveloped. The correction of that seems to me to be along the lines started by Mr. Hoover, as Secretary of the Department of Commerce, in the collection and dissemination of more information as to productive facilities, sales and stocks on hand. I believe that in addition to publishing this information in the Monthly Survey of Business of the Department of Commerce, it might be wise to proceed along the lines suggested by Mr. Chase and have an interpretation of this information by representative groups in the different industries.

Then there is another type of disequilibrium which has resulted in the flooding of markets by industry as a whole, such as we experienced in 1919 and the early part of 1920. I think those who have studied the question will agree that this type has been due in a large measure to general price inflation. The rapid and continued upward movement of prices has always resulted in the accumulation of stocks of goods all along the line from the manufacturer to the retailer, because of the anticipated further increase in prices. We have just gone through the same sort of an orgy in our stock market, and what is clearly needed is a review of our whole banking structure in its relation to the orderly progress of finance, business and industry. We should consciously set ourselves in our banking system toward eliminating that type of disequilibrium, which results in price inflationary movements. I think that will remove, in a large part, the ups and downs of what we call the business cycle. We are moving slowly but surely toward that goal, not only in this country but abroad, through the efforts of the Stable Money Association and others who are interested in this problem.

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[11]Professor of Industrial Engineering, Sheffield Scientific School, Yale University, New Haven, Conn.

This crisis we have just passed through has not been a business crisis but a purely financial one, due to the fact that prices of commodities were not inflated as the prices of stocks were inflated. Whether that is the result of conscious action on the part of the Federal Reserve Banks makes no difference. The fact is that we did not have the inflation and we are now reaping the rewards. But we still have ups and downs in general business activity. There were fairly well marked declines in industrial activity in 1924, 1927, and another decline, which is still in progress, began about five months ago.

Why do these declines take place in spite of the **fact that we have had relatively stable prices for commodities?** The answer lies in the inequalities that exist from time to time in purchasing power of people as a whole, compared with the total value of goods produced. Various reasons are given for these inequalities, such as increased efficiency of machinery and increased efficiency of labor. Until we find a way of measuring the value of goods produced in terms of purchasing power we shall never have a real answer to this problem of industrial equilibrium.

I think I pointed a way in a book (*Costs and Profits*) which I wrote for the Pollak Foundation some years ago, but that is too long a story to tell here. I do want to say, however, that I disagreed with one of the conclusions that my former associates, Mr. Foster and Mr. Catchings, got out of that process of reasoning. In their so-called "Dilemma of Thrift" they hold the saving process responsible for industrial disequilibrium. I believe that the dilemma of thrift is a purely economic nightmare and that we can save a practically unlimited amount without interfering with the productive process and full employment.

We should have convincing answers to such questions as: Will the increase in wages advocated by the President, and acted upon by Mr. Ford, or a shorter working week, really tend to bring about a balance between goods produced and purchasing power? I do not believe they will in the long run. Will an enlarged program of government work, such as that now proposed, tend to bring about balance between the two? Again I think not, in spite of the general opinion on that subject. Does tax reduction tend to restore permanently a balance between production and consumption? Again I think not. Some of these may be temporary aids but they are not permanent solutions.

The above questions are all a part of this general problem of equilibrium and, as I have said, I do not believe we shall make substantial progress in solving it until we devise a sound method of measuring the consuming power of the public in terms of the value of goods produced.

Norman Lombard.[12] It will be of interest to members of the Taylor Society to hear the views of Mr. Carl Snyder, General Statistician of the Federal Reserve Bank of New York, as he expressed them in his annual address as president of the American Statistical Association in Chicago last year.

"It is not without interest that the phrase 'hard times,' so widely prevalent in economic writings for several generations, has almost disappeared from the vocabulary of our own. . . .

"These later periods of financial and industrial disturbance seem largely due to a state of imbalance which appears to arise from a disparity between the growth of the volume of trade and production, on the one hand, and the volume of credit on the other.

" . . . . If, then, the augmentation of the credit supply is the vital factor, we have here what may well be an object of the most general concern, especially if, as seems true, this is in large measure subject to rational control. We have learned to measure the rate of our industrial growth. We may

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[12]The Stable Money Association, New York.