IN some of his talks Mr. Rowntree discussed the question of industrial peace. In that connection he in one talk related the story of Lloyd George addressing a group of industrial leaders shortly after the armistice, somewhat as follows: "We all know the world is in a turmoil as a result of the new ideas generated by the experiences of the past five years, and we know that there will be eventually a settling down to something more stable; we do not know, however, what form that settlement will take; we can be sure it will be something different from the conditions before the war; what form it does take will depend in large part on the vision which you show in industrial leadership." Mr. Rowntree's vision is expressed in the following formula:

1. There must be a minimum wage, adjusted to prices, which will enable a workman to marry, raise a family of normal size in conditions of proper health, and lay by something for old age.

2. The hours of work must be short enough to enable the worker to recreate himself in whatever way he chooses outside the factory gates.

3. There must be unemployment insurance provided for by contributions of both employers and employees.

4. There must be democracy in the organization and conduct of an enterprise; the employee should assist in the making of the laws and in choosing people to administer them; and he should have the right of appeal in all matters of dispute to a court of appeal consisting of representatives of both employers and employees.

5. Employees should participate in the profits of the industry.

WE do not know whether the following incident related by B. C. Forbes in the *New York American* (Nov. 18, 1921), is an historic fact, but it is so pat that we hope it is:

"When the most famous of the early steel makers of America, Captain Bill Jones, first received (from the Pennsylvania Railroad) a chemical formula for improving the quality of steel rails, he was extremely annoyed, and remarked contemptuously, "This here chemistry will ruin the steel business." No steel plant today could be conducted without knowledge of chemistry. Rule-of-thumb methods are entirely out of date.

"Yet most big business men still take the Bill Jones attitude in conducting their enterprises; they pooh-pooh the science and the students of economics, and smugly imagine that their rule-of-thumb way of conducting business is the only successful way. Captain Bill Jones ridiculed the idea of anyone being able to improve the ingredients going into the making of steel rails because of knowledge of chemicals.

"Many of our industrial and even our financial giants similarly ridicule the idea of any student of economics being able to give them any useful, practical pointers to keep them to run their affairs more successfully. These men are just as foolishly short-sighted as Captain Bill was."

A few members of the Taylor Society, we are afraid, have an attitude approaching that of Bill Jones. We sometimes receive the query why we include in our program papers on "social problems"—a query which implies a wonder on the part of the enquirer what ecomists and other such folk have to contribute to the science of management.

Now our point of view is simply this: Taylor taught us to inquire into every condition surrounding a problem of management and to pursue investigation of that condition until knowledge gives us command of it—to eliminate or modify or adjust ourselves to it if it be undesirable; to accept or improve it if it be desirable; to acquire some degree of certainty in anticipation of it, if it be irregular in occurance; to *bring it under control*. To the extent that such *control* of conditions is established is there scientific management.

There are three classes of conditions which must be brought under control before scientific management can be established all along the line. The first is physical conditions—plant, equipment, tools, physical processes. That is the point of which Taylor made his attack and we have gone a long way towards solving such problems. The second is human conditions—executives' and workers' abilities and willingness to work, and we have begun the attack on those problems. The third is a complex of conditions outside any particular enterprise but profoundly affecting each enterprise, and in a measure capable of being brought under control by associated effort—cyclic changes and variations in demand; changes in general prices. We are beginning an attack on these problems.

All-round scientific management will not be achieved until all three classes of conditions have been investigated and brought under control. It is the function of the Taylor Society to promote investigations with respect to all. Economists and other students of social forces have as much to contribute respecting the second and third classes of conditions as have plant executives.

BAROMETERS OF PRODUCTION[1]

By Carl Snyder[2]

OURS is such an enormous country, and, in most lines of industry, production is on so large a scale, that secrecy is no longer an advantage. On the contrary, it is rather the manufacturer and producer who suffers most from overproduction or who loses most from underproduction at the wrong time. Retailers and even jobbers and wholesalers rarely have on hand any tremendous stocks of merchandise. The business of the wholesalers is characterized by a very rapid turnover and that of retailers by relatively small stocks of any particular line. The only person who is very deeply concerned in figures as to actual production is the large-scale producer.

This is especially true in those industries which involve the long-time processes. For them it is almost imperative at any particular time to know the market a long way ahead. The proof of this was the terrific losses endured by large producers during the past year. If it had been perfectly clear that production was unusually heavy, and that it was obviously topheavy in certain lines and rapidly becoming out of balance, caution and not the most reckless scramble to produce would have been characteristic of the earlier part of last year.

Now it is the usual belief of the average man that if anything bad has happened it is not likely to happen again very soon. The very quality of optimism which leads to this sort of a feeling is that which makes for his business success. The average man hasn't much courage or daring when his optimism gives out. It is a very general belief that a severe crisis, like that of last year, having taken place, a repetition of it is not likely to occur again for at least a considerable length of time. Such a view is based upon the general fact that, in the past, crises have been rather widely spaced.

But it may be well to point out that the historical parallel is no safe basis for forecasting the future. For example, it was the almost universal belief that when the world war closed a heavy and prolonged fall of prices would ensue. The air was filled with such predictions and many of them, unfortunately, were reduced to writing and even published. We know what happened: instead of a violent fall we had the most violent rise in prices ever known in peace times; instead of a depression which many anticipated, we had, after a brief lull, the wildest boom this country has seen in more than a generation. We have to go back to the days of the Western land booms in the 80's to find anything that was really comparable to it.

Now we have had an equally unprecedented and violent fall in prices. Practically nothing like such a fall in such a period of time has been known in a century and a half. The nearest approach to it was just before the close of the Civil War, and that brought on no such crisis as we went through last year, and was followed by a very rapid rebound in prices.

Now we have a flood of literature "explaining" just how it all happened, in the last two years, and the prevalent view is that, now that we have had a "post-war spree," what should have taken place two years ago will proceed in an orderly fashion, viz., the return to "normal prices," as if any such thing as normal prices ever existed. Those who have memories which outlast half a year will recall that, in 1912, before we had been disturbed by any world war or vast issues of Government debt or the like, the outcry at the high cost of living was almost as great as it became last year. We had then had a 50 per cent rise in prices from the level of 1896, and I think it safe to say that, in each year of this rise, there were dozens of predictions printed and on record that the rise had gone far enough and that prices would again turn downwards to "normal."

There is nothing drearier than to go back and read the kind of stuff that is printed year after year, in the way of forecasts and predictions and current explanations of current events. The marvelous thing is that we get the same sort of stuff almost in the same identical language, year after year, without the slightest regard for anything that has happened in the meantime. A distinguished financier who is not above this weakness himself, since he is much importuned for such vaticinations, once remarked that it would

[1] A paper presented at the Cleveland, O., meeting of the Taylor Society, May 19, 1921.

[2] Statistician, Federal Reserve Bank, New York.