of various sorts at money prices. For their markets these enterprises depend directly upon other business enterprises, or directly upon individual consumers. In the last resort even the business demand for things like machines and cement depends upon the consumers' demand for things like food, clothing and housing. Consumers, in turn, get the incomes which enable them to buy direct from business enterprises for the most part, as wages, profits, dividends, interest or rents. Indirectly, even the professional man who works for individuals or governments, like the physician and the policeman, is dependent upon incomes derived from business.

Here we have another picture of economic interdependence quite as emphatic in its emphasis upon balanced relationships as the mathematical theory of static equilibrium. But this picture does not represent balances as attained. On the contrary, it utilizes the temporary excess of one factor over another to explain how changes come about—how commodity prices rise and fall, for example, how physical production waxes and wanes, how population shifts to and fro between rural and urban areas, and so on. Instead of picturing the changes as tending to establish an equilibrium, it pictures them as giving rise to new conditions characterized by stresses which lead to further changes, and so on indefinitely. Economic life is conceived as an evolving process of cumulative changes, more like biological evolution than like mechanical equilibrium. To facilitate investigation, the changes in process all the time are classified broadly as random, seasonal, cyclical and secular movements. Efforts are made to find how each of these types of change comes to pass and how the several types are related to each other. While students of these movements commonly deny that economic activities ever reach a state of equilibrium, they make continual use of the idea of equilibrium, in the sense that they explain the direction of the changes taking place at a given time by the character of the disequilibrium which preceded or is anticipated. This is a permissible interpretation of their general procedure.

IV

Now turn back to the sponsoring committee's report. We "can go on with increasing activity," says the committee, "only if we develop a technique of balance." The mathematical theory of equilibrium says that in an economy where free interchange of goods can take place, equilibrium tends to establish itself. The realistic students of economic fluctuations say that some condition of disequilibrium always prevails and is always bringing about changes, which result in a somewhat different condition of disequilibrium and a new set of changes, world without end.

Are these three statements incompatible with each other? Not in the least, I think, when each is reasonably interpreted.

In a sense, free exchange of goods is a technique of balance. It might, therefore, be said that we already have the technique which the committee says we should develop. But no pure theorist would claim that in real life commercial demand and supply are based on adequate knowledge of such factors as consumers' tastes, consumers' incomes or costs of production. Taking the committee's viewpoint as citizens interested in social welfare, the pure theorist would grant that there is plenty of room for improvement in our technique of balance.

On the other hand, I doubt whether the sponsoring committee would abolish all disturbances of economic equilibrium if they could do so. For that might check progress per capita production and consumption. What the committee wish is, presumably, to make an improved technique of balance serve industrial progress. They realize that almost every improvement in economic practice disturbs some of the rough-and-ready balances on which business men base their plans; and puts someone under pressure. Most of us believe that other people need such outside pressure to give most to and get most out of life. We attribute a great part of the mechanical progress of the last hundred years to the pressure which those who early adopted superior methods applied to their slower-moving competitors. The desideratum seems to be a technique of balance which will permit of cumulative changes, each of which disturbs existing arrangements enough to secure the prompt adoption of improvements and keep everybody on his mettle, but a technique which will prevent these salutary irritants from developing into cancers. In other words, the aim is to reduce random, seasonal and cyclical fluctuations in economic activity, so far as that can be done without checking the rise of secular trends.

Needless to say, it will take a most discriminating technique of balance to accomplish this ideal. Yet the fact-finding report of the National Bureau on "Recent Economic Changes" indicates that gratifying progress in that direction has been made of late. The half-dozen years preceding 1929 combined moderation of cyclical fluctuations with acceleration in the rate at which per capita income grew. Doubtless circumstances which no man planned contributed to this outcome; but part of the result was due to human contrivance. Nor does any reason appear why, by the continued exercise of their inventive powers, men may not better the accomplishments that are recorded from 1923-28.

V

There remains a subtle problem of which we are all dimly aware, a problem which critics of modern economic life often emphasize, but a problem which we seldom discuss constructively. This is the danger that we may upset our working economic equilibrium by producing too many goods. The form of economic organization which we have developed, in which the unit is a business enterprise seeking to make profits, often makes it necessary to limit industrial output.

I may take an illustration from Paul H. Nystrom's new book on the *Economic Principles of Consumption*. On the basis of census figures for the active year 1923, Nystrom concludes:

". . . in the manufacturing industries it seems probable that there is at least 25 per cent general overcapacity for production for which there is no consumer demand even during prosperous years. It is commonly believed that the percentages of over capacity given in the Census of Manufactures are very conservative. . . . It may safely be assumed that if there were general, effective demand for manufactured goods at prices that would produce profits for the manufacturers, actual production as represented even in the 1923 figures might easily be doubled almost immediately.

"The productive capacity of farms (Nystrom continues) is also much greater than the present consumer demand. For several years the acreage actually under the plow and producing crops has been declining as has the farm population. If there were a profitable demand, it is certain that the production of agricultural products could be greatly increased, but not immediately, for it takes time to establish higher scales of production in grains, meat, animals and other farm products."[3]

All of us are more or less familiar with these uncomfortable facts. They have a spice of paradox. Supposedly our wants are far from satisfied. Supposedly we dislike to labor and to wait. We submit to these sacrifices only because we want the goods which labor and capital produce. Yet we have saved and invested in productive equipment for mines, farms and factories more capital than we have use for in a busy year. Also there are more of us eager to make the sacrifice of labor than can get steady jobs. Our captains of industry, against their own inclinations, are forced to hold a large fraction of our existing capital idle and to refuse work to a smaller, but still appreciable fraction of our labor force. If they acted otherwise, they would lose money for their enterprises and bring on a period of general depression in which the level of employment for labor and capital would fall lower still.

Summing up this situation in one of his whiplash phrases, Thorstein Veblen said that the chief service to industry rendered by the modern business executive is to practice "capitalistic sabotage."

In seeking to develop the "technique of balance" for which the sponsoring committee calls, we should face honestly this ambiguous relation of business profits to economic welfare. Presumably a rough industrial equilibrium can be worked out in the United States on a relatively high or on a relatively low level of per capita real income. Every enterprise and every industry which seeks to increase its profits by restricting production makes it more difficult to achieve a balance on the high real income level. A leading point in our technique should be to level up industrial output, not to level down.

That call is hard to answer. Yet there is evidence of achievement. Last year Horace Taylor, one of my colleagues at Columbia, published a book called *Making Goods and Making Money* in which he reviewed American practice in manufacturing goods over several decades. He concluded that:[4]

". . . as time goes on it is becoming increasingly

[3] Nystrom, Paul H., *Economic Principles of Consumption*, New York, The Ronald Press Company, 1929, pp. 18, 19.

[4] Taylor, Horace, *Making Goods and Making Money*, New York, The Macmillan Company, 1928, p. 266.