

idleness, and are not dependable for the reasons stated above. The National Industrial Conference Board receives monthly reports of concerns in twenty-five manufacturing industries which show normal hours of plant operation as compared with average hours worked per wage earner per week, but no accurate records of unused capacity. Besides such data, percentages of capacity are computed monthly for cotton spinning and wool spinning and weaving by the Federal Census Bureau and for silk spinning and weaving by the Silk Association of America. The *Monthly Survey of Current Business* of the Federal Bureaus of the Census, Standards, and Foreign and Domestic Commerce, also furnish monthly percentages of production in various industries. Finally, since February, 1927, the Federal Reserve Bulletin has published a monthly index of industrial production. This index is valuable in showing the violent fluctuations in physical production for all manufactures between 1919 and the present. None of these sources, however, furnishes more than piecemeal data on the margin of idle facilities.

Concerning the possibility of getting comprehensive data of such idleness, Mr. Wallace Clark says: "It is not so difficult as might be supposed to secure dependable records of unused capacity; in fact, it would be possible, by accurate charting methods covering only one month's time, to ascertain the margin of idleness in any American industry."

Lacking dependable records of this nature, we may nevertheless get some notion of the extent of unused facilities from the Federal Reserve Board's new index of production. The index shows that production in the depression year 1921 was forty-four per cent below the average for 1923 to 1925, inclusive, while in 1926 it rose eight per cent above that average. This represents a high range of fluctuation of more than fifty per cent in six years, without taking account of the constant margin of idle time above the fluctuation range during that period.

The great increase in goods produced during 1926 over the depression year 1921 is usually explained as due chiefly to the increased purchasing power of consumers. Such purchasing power currently determines whether the savings of industry, expressed in capital facilities, are to be wasted or

<sup>10</sup>Op. Cit., p. 130.

used to enhance living standards. Thus during the decade and a half between 1899 and 1914, while average real earnings of employed workers failed to advance, output per employe rose by less than one-half of one per cent a year.<sup>9</sup>

Indeed, in 1919, the physical output per worker fell three per cent below that of 1914. But since 1921 has occurred an increase in real income of thirty-six per cent.<sup>10</sup> Along with this increase in purchasing power, output per worker has increased by forty per cent, of which gain eight-ninths has taken place in the last five years, as indicated by the production index of the Federal Reserve Board.

#### Modern Technique Dispenses With Wage Earners

Later we shall inquire into the cause of these astonishing parallel increases in production and real wages. But it may first be observed that this change has occurred along with an absolute decrease in number of wage-earning workers. Thus the Census of Manufactures for 1925 shows seven per cent less wage earners than in 1919.

This absolute decrease took place while the population was increasing by two per cent a year, or twelve per cent in six years. It prompts at once the question whether the rapid development of American technical methods has something to do with the relative disappearance of human labor. Are automatic machinery and highly developed management methods now for the first time dispensing with human labor on a general scale, and in the process cutting off consumer purchasing power as hitherto expressed in the earnings of those dispensed with?

Statisticians have long observed the increase of "race suicide" among nations. Can it be that modern production is now committing "labor suicide"? Moreover, is it not playing the homicide to consumer purchasing power, by the process of automatic mechanization that enables management progressively to get along with fewer workers?

On behalf of the workers thus disemployed, Secretary of Labor Davis has been among the first to point out the danger. In his *Monthly Labor Review* article Secretary Davis remarks: "In the

<sup>9</sup>See paper by Paul H. Douglas, "Recent Movement of Real Wages and Its Economic Significance," Proceeding of the Thirty-eighth Annual Meeting American Economic Association, Supplement *American Economic Review*, March, 1926, pp. 33-37.

<sup>10</sup>*News Bulletin*, National Bureau of Economic Research, No. 23, February 31, 1927, p. 3.

long run new types of industries have always absorbed the workers displaced by machinery, but of late we have been developing new machinery at a faster rate than we have been developing new industries. Inventive genius needs to turn itself in this direction. I tremble to think what a state we might be in as a result of this development of machinery without the bars we have lately set up against wholesale immigration."<sup>11</sup>

The Department of Labor estimated in 1925, that if forty per cent of the coal mines should give full-time employment to only seventy-five per cent of the miners, they could produce enough coal to meet the nation's demands. The Department calculated that the country's window and glass factories could supply in seventeen weeks all that the nation could consume in a year, and that if fourteen per cent of the boot and shoe factories were operated at full capacity, they could supply the country with enough of their product.<sup>12</sup> The Labor Department estimates that the iron and steel industry, with its present equipment, could produce in seven months all that our markets could take for a year; moreover, if all the plants of this industry were made as efficient as its best plants already are, two-thirds of the present army of employes in the iron and steel industry might be dispensed with in producing the same output. The lumber industry is estimated to be working at thirty-five per cent under capacity. If all the lumber mills were brought up to the output per man-hour that is attained in the best plants, the industry's present "overbuilt" condition would grow into something astounding; the standard output in the best mills is 323 board feet per man-hour, as compared with mills that produce only fifteen board feet per man-hour. If a few members of the Taylor Society were let loose upon the saw-mills of the United States, bringing them up to the standard of the existing best mills, and training 45,000 of their men to be as efficient as those now employed by the best mills, their force of 292,000 men would be displaced by these forty-five thousand men.

<sup>11</sup>See article "Is Prosperity Creating Unemployment?" by James J. Davis, U. S. Secretary of Labor, *Magazine of Wall Street*, October 13, 1927; also "Problem of the Worker Displaced by Machinery," by Secretary Davis, *Monthly Labor Review*, Bureau of Labor Statistics, September, 1927.

<sup>12</sup>*Bulletin of the National Metal Trades Association*, Chicago, October 15, 1925.

Now this accelerating process of reducing man-hours by substituting machines and more thrifty management for human workers, is one to which I assume that the Taylor Society, of all bodies, is justly and completely devoted. For the disciples of Frederick W. Taylor this consummation cannot come too soon. But they will be the first to recognize, I am sure, that while they are acting as scientific prime movers of this process, it is short-circuiting the flow of money for goods that must be sold if idle facilities are to be activated. If the circuit flow of money from producers to the disemployed workers is not in some way re-established, the consumer body that depends on a full quota of man-hours for its livelihood, together with the plants, machinery and management systems that depend on consumer purchasing power to take away the enhanced production may fall confounded, and industry will have to face more economic crises like that of 1921.

In searching for a preventive of such crises, it might be asked: What has served to prevent their recurrence during the past six years? Why, while still working far below the capacity of our industrial equipment, have we nevertheless made notable gains in production, in consumption, and in the real income of the people?

Our analysis thus far indicates clearly, I think, that savings in process, whether by superior force of organization or by improved machinery, tend to accumulate in the form of unused facilities; that is, into the concrete unused savings of the nation, representing corporate and individual investments, unless an increment of purchasing power can be provided to balance the steadily increasing store of physical savings. The savings are manifest. They are being provided more prodigally than ever, by the skills of the inventors and engineers that are being transmitted daily to the business organism. It is such individual and corporate savings that tend to produce shortages in consumer purchasing power, for the simple reason that one cannot at the same time have his cake and eat it.

But all cake, after all, is made to be eaten; and industry is carried on for the sole purpose of consumption. As more and more capital goods are produced through savings and economies, there comes a time when this accumulation must find release into consumptive potentialities and increase the standard of living. This has taken place.