

The Technological Dodge

By C. O. STEELE

Technological unemployment is a social problem. Being a social problem, it is not concerned with shifts within the ranks of labor, with individual experiences or isolated cases as such. It is concerned solely with the effect that technological development exerts on labor as a whole, for nothing is a cause of unemployment in the social sense unless it results in a decrease in the total number of persons employed.

And yet, various bodies of opinion and persons of high position are continually talking of technological unemployment, and condemning the machine as a menace to labor, without offering the slightest evidence that labor as a whole has been harmed. The technocrats, though favoring the use of the machine in their plan for revolutionizing the present economic system, admit, as they put it, that the machine brings

disastrous unemployment. President Roosevelt, in a message to Congress, said, "We have not yet found a way to employ the surplus of our labor which the efficiency of our industrial processes has created," and, "To face the task of finding jobs faster than invention can take them away is not defeatism."

Philip Murray, vice-president of the United Mine Workers of America, told his union's convention that the new continuous process of making steel will displace nearly 90,000 steel workers in the early future. Mr. Murray's figures deal not with what has happened but with what he expects to happen. Even if soundly based these figures prove nothing concerning employment as a whole, since they apply to a single industry. As it happens, technological changes in the past decade have not caused unemployment in the industry. The

United States Steel Corporation, for example, increased its average number of workers from 224,980 in 1929 to an average of 261,293 in 1937, though practically all of its labor-saving mills had been installed by the latter year.

Steel output slumped badly in 1938, with a consequent decrease in the number of workers employed by U. S. Steel. Recovery set in in the following year, and in December employment by the corporation had risen to 260,000. For the steel industry as a whole, employment in 1939 averaged 425,000. This was some seven per cent below the 1929 average, but steel output in 1939 was sixteen per cent under the 1929 production. In December of 1939, a boom month, employment in the industry reached 503,000. Thus we find shifts in the number of workers engaged in making steel, but these

are due to seasonal influences and the rise and fall in general business. There is nothing to indicate that total employment has been decreased in the slightest by the introduction of more efficient machinery, nor, if past experience affords any clue, as to the future, that Mr. Murray's doleful prediction is soundly based.

John L. Lewis says that each recovery period carries the seeds of a new depression. Just as soon as business begins to pick up, he asserts, manufacturers install labor-saving machinery, and men and women are thrown out of work. Through loss of purchasing power their status as consumers is lowered, which in turn results in other workers losing their jobs. The process continues to repeat itself, says Mr. Lewis, and a new depression is on the way. These are but a few of the opinions, emanating from supposedly authoritative sources, which bolster the belief that employment in the aggregate is decreased by the development of new and more efficient machines.

It is not denied, of course, that labor-saving machinery often leads to the displacement of particular groups of workers, and may often cause great hardships to those workers, particularly if they have spent years in acquiring a highly specialized skill. This is the first effect of the introduction of labor-saving machinery. But the machinery is introduced only because it improves the quality of the product or reduces costs of production. In either case it tends to expand the market for that product, either by giving consumers something better for their money, or the same thing for less money. As a result more men than ever are frequently employed in that industry. But even if lower production costs and consequent lower prices do not increase the sale of a product—because demand for it may be inelastic—it remains true that because of the lower prices consumers have more money left with which to buy other things. As a result, employment increases in other lines.

By development of the assembly line and constant improvement in mechanical operations Henry Ford

has brought the labor cost per automobile down to a fraction of what it was thirty years ago. That would imply a great displacement of human labor, would it not? Does anyone believe that Henry Ford, having through improved machinery brought the automobile within the reach of millions, whereas formerly only the rich could buy it, is employing fewer workers today than thirty years ago? And that is but part of the story. Think of the chauffeurs, mechanics, truck drivers, repair men, gas station attendants, workers in glass factories and steel mills supplying the auto trade, and the workers in tire plants and in factories where the hundreds of parts and accessories are produced that go into an automobile but are not ordinarily made in the automobile plant. Are not their jobs the direct result of the popularizing of the automobiles through better and better machines?

The rayon industry is frequently cited as one which has caused widespread unemployment among producers of silk and cotton. It is also claimed that the steady improvement in the production methods in the industry has made for a constant decline in the number of workers employed in the industry. Let us look at the figures. World production of rayon yarn in 1925 amounted to 186.5 millions of pounds; in 1937 production had climbed to 1,198,760 millions of pounds, or 6,400 times as much. But in the same twelve years, world production of silk—88,052 millions of pounds in 1925, and 88,366 in 1937—was off only about 5%, which might be attributed to the Japanese-Chinese war. World production of cotton in 1925 was 16.1 millions of bales, and 18.9 millions in 1937, a gain of close to 15%. Clearly, then, the development of the rayon industry has caused no decrease in production of the older textile basics with which it competes. Moreover, despite the amazing advances that have taken

place within the rayon industry in the way of more efficient machines, it is inconceivable that the improvement has been sufficient to turn out more than 6,400 times as much rayon without an increase, rather than a decrease, in the number of workers employed. And even if the industry had been completely mechanized and no human labor was any longer required, employment in the aggregate would still have been enormously increased by the vast numbers of workers now engaged in converting rayon yarn into fabrics and finished goods.

The fact is that while more efficient machinery displaces workers temporarily and alters the relation between industries, in the long run it creates jobs. The population of the United States in 1870 was 38,558,371. In 1930 it had increased to 122,775,046, a gain of 220%. During that 60-year period the world probably saw more progress in the development of the machine than was seen in the previous 600 years. If men were permanently to be displaced by machines, then was the time of all times that it should have occurred.

But what happened? In 1870, according to figures of the Bureau of Census, there were 11,909,736 persons gainfully employed in the United States. In 1930, the number was 48,829,920, a gain of 310%. Stated another way, the number of gainfully employed in 1870 was equal to 31% of the country's population at that time. Sixty years later, when labor-saving devices undreamed of in 1870 had come into common use, the number of workers employed equaled 40% of the population of the country.

Thus, during the period when, according to technocrats, politicians and labor leaders, the steady advance in the efficiency of the machine should have wreaked havoc with employment, the number of persons gainfully employed increased much faster than did the population of the country. If anything were needed to prove that the self-styled experts on machinery and employment are talking through their collective hat, these figures would appear to do the trick.

