CHAPTER V

THE RATE OF INCREASE OF TOTAL OUTPUT

The atmosphere of hostility to capitalism which we shall have to explain presently makes it much more difficult than it otherwise would be to form a rational opinion about its economic and cultural performance. The public mind has by now so thoroughly grown out of humor with it as to make condemnation of capitalism and all its works a foregone conclusion—almost a requirement of the etiquette of discussion. Whatever his political preference, every writer or speaker hastens to conform to this code and to emphasize his critical attitude, his freedom from “complacency,” his belief in the inadequacies of capitalist achievement, his aversion to capitalist and his sympathy with anti-capitalist interests. Any other attitude is voted not only foolish but anti-social and is looked upon as an indication of immoral servitude. This is of course perfectly natural. New social religions will always have that effect. Only it does not make it easier to fulfill the analyst’s task: in 300 A.D. it would not have been easy to expound the achievements of ancient civilization to a fervent believer in Christianity. On the one hand, the most obvious truths are simply put out of court a limine; on the other hand, the most obvious misstatements are borne with or applauded.

A first test of economic performance is total output, the total of all the commodities and services produced in a unit of time—a year or a quarter of a year or a month. Economists try to measure variations in this quantity by means of indices derived from a number of series representing the output of individual commodities. “Strict logic is a stern master, and if one respected it, one would never construct or use any production index,” for not only the material and the technique of constructing such an index, but the very concept of a total output of different commodities produced in ever-changing proportions, is a highly doubtful matter. Nevertheless, I believe that this device is sufficiently reliable to give us a general idea.

1 There is however another method of dealing with obvious though uncomfortable truth, viz., the method of sneering at its triviality. Such a sneer will serve as well as a refutation would, for the average audience is as a rule perfectly unaware of the fact that it often covers the impossibility of denial—a pretty specimen of social psychology.

2 A.F. Burns, Production Trends in the United States Since 1870, p. 262.

3 We cannot enter into this problem here. A little will, however, be said about it when we meet it again in the next chapter. For a fuller treatment see my book on Business Cycles, ch. ix.
For the United States, individual series good and numerous enough to warrant construction of such an index of output are available since the Civil War. Choosing what is known as the Day-Persons index of total production we find that, from 1870 to 1930, the average annual rate of growth was 3.7 per cent and, in the division of manufactures alone, 4.3 per cent. Let us concentrate on the former figure and try to visualize what it means. In order to do this we must first apply a correction: since the durable equipment of industry was always increasing in relative importance, output available for consumption cannot have increased at the same rate as total production. We must allow for that. But I believe that an allowance of 1.7 per cent is ample; thus we arrive at a rate of increase in “available output” of 2 per cent (compound interest) per year.

Now suppose that the capitalist engine keeps on producing at that rate of increase for another half century starting from 1928. To this assumption there are various objections which will have to be noticed later on, but it cannot be objected to on the ground that in the decade from 1929 to 1939 capitalism had already failed to live up to that standard. For the depression that ran its course from the last quarter of 1929 to the third quarter of 1932 does not prove that a secular break has occurred in the propelling mechanism of capitalist production because depressions of such severity have repeatedly occurred—roughly once in fifty-five years—and because the effects of one of them—the one from 1873 to 1877—are taken account of in the annual average of 2 per cent. The subnormal recovery to 1935, the subnormal prosperity to 1937 and the slump after that are easily accounted for by the difficulties incident to the adaptation to a new fiscal policy, new labor legislation and a general change in the attitude of government to private enterprise all of which can, in a sense to be defined later, be distinguished from the working of the productive apparatus as such.

Since misunderstandings at this point would be especially undesirable, I wish to emphasize that the last sentence does not in itself imply either an adverse criticism of the New Deal policies or the proposition—which I do believe to be true but which I do not need just now—that policies of that type are in the long run incompatible with the effective working of the system of private enterprise. All I now mean to imply is that so extensive and rapid a change of the social scene naturally affects productive performance for a time, and so much the most ardent New Dealer must and also can admit. I for one do not see how it would otherwise be possible to

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4 See W.M. Persons, *Forecasting Business Cycles*, ch. xi.

5 That allowance is in fact absurdly large. See also Professor F.C. Mill’s estimate of 3.1 per cent for the period 1901–1913, and of 3.8 per cent for the period 1922–1929 (construction excluded; *Economic Tendencies in the United States, 1932*).
account for the fact that this country which had the best chance of recovering quickly was precisely the one to experience the most unsatisfactory recovery. The only somewhat similar case, that of France, supports the same inference. It follows that the course of events during the decade from 1929 to 1939 does not per se constitute a valid reason for refusing to listen to the argument in hand which, moreover, may in any case serve to illustrate the meaning of past performance.

Well, if from 1928 on available production under the conditions of the capitalist order continued to develop as it did before, i.e., at a long-run average rate of increase of 2 per cent per year, it would after fifty years, in 1978, reach an amount of roughly 2.7 (2.6916) times the 1928 figure. In order to translate this into terms of average real income per head of population, we first observe that our rate of increase in total output may be roughly equated to the rate of increase in the sum total of private money incomes available for consumption, corrected for changes in the purchasing power of the consumers’ dollars. Second, we must form an idea about the increase in population we are to expect; we will choose Mr. Sloane’s estimate, which gives 160 millions for 1978. Average income per head during those fifty years would therefore increase to a little more than double its 1928 amount, which was about $650, or to about $1300 of 1928 purchasing power.

Perhaps some readers feel that a proviso should be added about the distribution of the total monetary income. Until about forty years ago, many economists besides Marx believed that the capitalist process tended to change relative shares in the national total so that the obvious inference from our average might be invalidated by the rich growing richer and the poor growing poorer, at least relatively. But there is no such tendency. Whatever may be thought of the statistical measures devised for the purpose, this much is certain: that the structure of the pyramid of incomes, expressed in terms of money, has not greatly changed during the period covered by our material—which for England

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6 “Consumption” includes the acquisition of durable consumers’ goods such as motor cars, refrigerators and homes. We do not distinguish between transient consumers’ goods and what is sometimes referred to as “consumers’ capital.”

7 That is to say, average real income per head would increase at a compound interest rate of 1? per cent. It so happens that in England, during the century preceding the First World War, real income per head of population increased at almost exactly that rate (see Lord Stamp in Wealth and Taxable Capacity). No great confidence can be placed in this coincidence. But I think it serves to show that our little calculation is not wildly absurd. In Number 241 of the National Industrial Conference Board Studies, Table I, pp. 6 and 7, we find that “per capita realized national income” adjusted by the Federal Reserve Bank of New York and the National Industrial Conference Board cost of living index, was in 1929 a little over four times the 1829 figure—a similar result, though open to still more serious doubts as to reliability.
includes the whole of the nineteenth century—and that the relative share of wages plus salaries has also been substantially constant over time. There is, so long as we are discussing what the capitalist engine might do if left to itself, no reason to believe that the distribution of incomes or the dispersion about our average would in 1978 be significantly different from what it was in 1928.

One way of expressing our result is that, if capitalism repeated its past performance for another half century starting with 1928, this would do away with anything that according to present standards could be called poverty, even in the lowest strata of the population, pathological cases alone excepted.

Nor is this all. Whatever else our index may do or may not do, it certainly does not overstate the actual rate of increase. It does not take account of the commodity, Voluntary Leisure. New commodities escape or are inadequately represented by an index which must rest largely on basic commodities and intermediate products. For the same reason improvements in quality almost completely fail to assert themselves although they constitute, in many lines, the core of the progress achieved—there is no way of expressing adequately the difference between a motorcar of 1940 and a motorcar of 1900 or the extent to which the price of motorcars per unit of utility has fallen. It would be more nearly possible to estimate the rate at which given quantities of raw materials or semi-finished products are made to go further than they used to—a steel ingot or a ton of coal, though they may be unchanged in physical quality, represent a multiple of their economic efficiency sixty years ago. But little has been done along this line. I have no idea about what would happen to our index if there were a method for correcting it for these and similar factors. It is certain, however, that its percentage rate of change would be increased and that we have here a reserve that should make the estimate adopted proof against the effects of any conceivable downward revision. Moreover, even if we had the means of measuring the change in the technological efficiency of industrial products, this measure would still fail to convey an adequate idea of what it means for the dignity or intensity or pleasantness of human life—for all that the economists of an earlier generation subsumed under the heading of Satisfaction of Wants. And this, after all, is for us the relevant consideration, the true “output” of

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8 See Stamp, op. cit. The same phenomenon can be observed in all countries for which there is sufficient statistical information, if we clear the latter of the disturbing effect of the cycles of various span that are covered by the available material. The measure of income distribution (or of inequality of incomes) devised by Vilfredo Pareto is open to objection. But the fact itself is independent of its shortcomings.
capitalist production, the reason why we are interested in the index of production and the pounds and gallons that enter into it and would hardly be worth while in themselves.

But let us keep to our 2 per cent. There is one more point that is important for a correct appraisal of that figure. I have stated above that, broadly speaking, relative shares in national income have remained substantially constant over the last hundred years. This, however, is true only if we measure them in money. Measured in real terms, relative shares have substantially changed in favor of the lower income groups. This follows from the fact that the capitalist engine is first and last an engine of mass production which unavoidably means also production for the masses, whereas, climbing upward in the scale of individual incomes, we find that an increasing proportion is being spent on personal services and on handmade commodities, the prices of which are largely a function of wage rates.

Verification is easy. There are no doubt some things available to the modern workman that Louis XIV himself would have been delighted to have yet was unable to have—modern dentistry for instance. On the whole, however, a budget on that level had little that really mattered to gain from capitalist achievement. Even speed of traveling may be assumed to have been a minor consideration for so very dignified a gentleman. Electric lighting is no great boon to anyone who has money enough to buy a sufficient number of candles and to pay servants to attend to them. It is the cheap cloth, the cheap cotton and rayon fabric, boots, motorcars and so on that are the typical achievements of capitalist production, and not as a rule improvements that would mean much to the rich man. Queen Elizabeth owned silk stockings. The capitalist achievement does not typically consist in providing more silk stockings for queens but in bringing them within the reach of factory girls in return for steadily decreasing amounts of effort.

The same fact stands out still better if we glance at those long waves in economic activity, analysis of which reveals the nature and mechanism of the capitalist process better than anything else. Each of them consists of an “industrial revolution” and the absorption of its effects. For instance, we are able to observe statistically and historically—the phenomenon is so clear that even our scanty information suffices to establish it—the rise of such a long wave toward the end of the 1780’s, its culmination around 1800, its downward sweep and then a sort of recovery ending at the beginning of the 1840’s. This was the Industrial Revolution dear to the heart of textbook writers. Upon its heels, however, came another such revolution producing another long wave that rose in the forties, culminated just before 1857 and
ebbed away to 1897, to be followed in turn by the one that reached its peak about 1911 and is now in the act of ebbing away.\textsuperscript{9}

These revolutions periodically reshape the existing structure of industry by introducing new methods of production—the mechanized factory, the electrified factory, chemical synthesis and the like; new commodities, such as railroad service, motorcars, electrical appliances; new forms of organization—the merger movement; new sources of supply—La Plata wool, American cotton, Katanga copper; new trade routes and markets to sell in and so on. This process of industrial change provides the ground swell that gives the general tone to business: while these things are being initiated we have brisk expenditure and predominating “prosperity”—interrupted, no doubt, by the negative phases of the shorter cycles that are superimposed on that ground swell—and while those things are being completed and their results pour forth we have elimination of antiquated elements of the industrial structure and predominating “depression.” Thus there are prolonged periods of rising and of falling prices, interest rates, employment and so on, which phenomena constitute parts of the mechanism of this process of recurrent rejuvenation of the productive apparatus.

Now these results each time consist in an avalanche of consumers’ goods that permanently deepens and widens the stream of real income although in the first instance they spell disturbance, losses and unemployment. And if we look at those avalanches of consumers’ goods we again find that each of them consists in articles of mass consumption and increases the purchasing power of the wage dollar more than that of any other dollar—in other words, that the capitalist process, not by coincidence but by virtue of its mechanism, progressively raises the standard of life of the masses. It does so through a sequence: of vicissitudes, the severity of which is proportional to the speed of the advance. But it does so effectively. One problem after another of the supply of commodities to the masses has been successfully solved\textsuperscript{10} by being brought within the reach of the methods of capitalist production. The most important one of those that remain, housing, is approaching solution by means of the pre-fabricated house.

And still this is not all. Appraisal of an economic order would be incomplete—and incidentally un-Marxian—if it stopped at the output which the corresponding economic conveyor hands to the various groups of society and left out of account all those things that the conveyor does not serve

\textsuperscript{9} These are the “long waves” which, in business cycle literature, are primarily associated with the name of N.D.Kondratieff.

\textsuperscript{10} This of course also applies to agricultural commodities, the cheap mass production of which was entirely the work of large-scale capitalist enterprise (railroads, shipping, agricultural machinery, fertilizers).
directly but for which it provides the means as well as the political volition, and all those cultural achievements that are induced by the mentality it generates. Deferring consideration of the latter (Chapter XI), we shall now turn to some aspects of the former.

The technique and atmosphere of the struggle for social legislation obscures the otherwise obvious facts that, on the one hand, part of this legislation presupposes previous capitalist success (in other words, wealth which had previously to be created by capitalist enterprise) and that, on the other hand, much of what social legislation develops and generalizes had been previously initiated by the action of the capitalist stratum itself. Both facts must of course be added to the sum total of capitalist performance. Now if the system had another run such as it had in the sixty years preceding 1928 and really reached the $1300 per head of population, it is easy to see that all the desiderata that have so far been espoused by any social reformers—practically without exception, including even the greater part of the cranks—either would be fulfilled automatically or could be fulfilled without significant interference with the capitalist process. Ample provision for the unemployed in particular would then be not only a tolerable but a light burden. Irresponsibility in creating unemployment and in financing the support of the unemployed might of course at any time create insoluble problems. But managed with ordinary prudence, an average annual expenditure of 16 billions on an average number of 16 million unemployed including dependents (10 per cent of the population) would not in itself be a serious matter with an available national income of the order of magnitude of 200 billion dollars (purchasing power of 1928).

May I call the reader’s attention to the reason why unemployment which everyone agrees must be one of the most important issues in any discussion of capitalism—with some critics so much so that they base their indictment exclusively on this element of the case—will play a comparatively small role in my argument? I do not think that unemployment is among those evils which, like poverty, capitalist evolution could ever eliminate of itself. I also do not think that there is any tendency for the unemployment percentage to increase in the long run. The only series covering a respectable time interval—roughly the sixty years preceding the First World War—gives the English trade-union percentage of unemployed members. It is a typically cyclical series and displays no trend (or a

11 That series has often been charted and analyzed. See for instance, A.C. Pigou. Industrial Fluctuations or my Business Cycles. For every country there seems to be an irreducible minimum and, superimposed on that, a cyclical movement, the strongest component of which has a period of about nine to ten years.
horizontal one). Since this is theoretically understandable—there is no theoretical reason to call the evidence in question—those two propositions seem established for the prewar time to 1913 inclusive. In the postwar time and in most countries unemployment was mostly at an abnormally high level even before 1930. But this and still more the unemployment during the thirties can be accounted for on grounds that have nothing to do with a long-run tendency of unemployment percentages to increase from causes inherent in the capitalist mechanism itself. I have mentioned above those industrial revolutions which are so characteristic of the capitalist process. Supernormal unemployment is one of the features of the periods of adaptation that follow upon the “prosperity phase” of each of them. We observe it in the 1820’s and 1870’s, and the period after 1920 is simply another of those periods. So far the phenomenon is essentially temporary in the sense that nothing can be inferred about it for the future. But there were a number of other factors which tended to intensify it—war effects, dislocations of foreign trade, wage policies, certain institutional changes that swelled the statistical figure, in England and Germany fiscal policies (also important in the United States since 1935) and so on. Some of these are no doubt symptoms of an “atmosphere” in which capitalism will work with decreasing efficiency. That however is another matter which will engage our attention later on.

But whether lasting or temporary, getting worse or not, unemployment undoubtedly is and always has been a scourge. In the next part of this book we shall have to list its possible elimination among the claims of the socialist order to superiority. Nevertheless, I hold that the real tragedy is not unemployment per se, but unemployment plus the impossibility of providing adequately for the unemployed without impairing the conditions of further economic development: for obviously the suffering and degradation—the destruction of human values—which we associate with unemployment, though not the waste of productive resources, would be largely eliminated and unemployment would lose practically all its terror if the private life of the unemployed were not seriously affected by their unemployment. The indictment stands that in the past—say, roughly, to the end of the nineteenth century—the capitalist order was not only unwilling but also quite incapable of guaranteeing this. But since it will be able to do so if it keeps up its past performance for another half century this indictment would in that case enter the limbo filled by the sorry specters of child labor and sixteen-hour working days and five persons living in one room which it is quite proper to emphasize when we are talking about the past social costs of capitalist achievement but which are not necessarily relevant to the balance of alternatives for the future. Our own time is
somewhere between the disabilities of earlier stages in capitalist evolution and the abilities of the system in full maturity. In this country at least, the better part of the task could even now be accomplished without undue strain on the system. The difficulties do not seem to consist so much in the lack of a surplus sufficient to blot out the darkest hues in the picture: they consist, on the one hand, in the fact that the unemployment figure has been increased by anti-capitalist policies beyond what it need have been in the thirties and, on the other hand, in the fact that public opinion as soon as it becomes at all alive to the duty in question, immediately insists on economically irrational methods of financing relief and on lax and wasteful methods of administering it.

Much the same argument applies to the future—and to a great extent the present—possibilities held out by capitalist evolution for the care of the aged and sick, for education and hygiene and so on. Also, an increasing number of commodities might reasonably be expected, from the standpoint of the individual household, to pass out of the class of economic goods and to be available practically up to the satiety point. This could be brought about either by arrangements between public agencies and producing concerns or by nationalization or municipalization, gradual progress with which would of course be a feature of the future development even of an otherwise unfettered capitalism.