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PART FIVE

ANOTHER APPROACH: THE MEANING AND REQUIREMENTS OF BALANCE

Introduction

THE factual evidence on business cycles may be used in another way: to give a broader basis to the type of study which starts from the conditions of a theoretical equilibrium and explains business cycles by the absence of some of these conditions. Such theories are likely to rely on too simple and one-sided a picture of the conditions of equilibrium, and as a consequence to get too simple results. There is great power of simplification in substituting for the question: "How does business operate?" the question: "Why does it *not* operate according to the picture of ideal equilibrium?" To know how business operates requires many facts: to know that it does not follow the ideal picture requires very few. And

the same is true of the task of explanation. To explain everything that happens is, needless to say, an impossible task; but when the question is: "Why does business *not* run smoothly?" one glaring gap in the conditions of equilibrium is sufficient for an answer which will carry conviction to many, however inadequate it may be to explain the full phenomenon of the actual cycle in all its complexity and variety.

But after a real factual survey one can ask this question with less danger of giving a naïvely simple answer. One sees that there are many conditions necessary to equilibrium, and many respects in which they are not fulfilled. Thus a more adequate attempt at the specification of the conditions of economic stability might furnish the basis for a more valid diagnosis of the causes of instability, while still simplifying the picture enough to make it manageable.

One very important thing which this method does is to afford a basis for an answer to the question 'why' instead of merely to the question 'how'. *Why* do things act in the way they do instead of in some other way? This we do not learn from a bare study of the facts, which merely tells us *how* different events succeed or accompany each other in the actual system we possess. To get even a tentative answer to the more searching question we need some basis for judging what would be the results of a system where certain crucial conditions were different; and

to answer it comprehensively we need a picture of a system in which there would be no business cycles.

One special service which such a method of study may render is to afford a basis for interpreting the meaning of trends operating over longer periods than the short cycles whose average length is forty months. Are these longer movements 'normal'? Are they evidence of lack of 'equilibrium'? Neither pure observation nor pure theory can give an absolute answer to such questions, but the two together can afford suggestions as to whether our economic system is such as to guarantee that such trends will be in a state of approximate equilibrium, or whether some of the necessary conditions are lacking. In the latter event, theory may indicate whether the results naturally to be expected are such as appear in the observed trends. These might then be provisionally diagnosed as representing lack of equilibrium: failure to balance the forces of supply and demand in the broadest sense. And if the concept of equilibrium is itself vague, such a study should help to make it more definite.

Of course, this picture of the requirements of stability would be an effort of the scientific imagination rather than a fact of observation; but a survey of the facts should vastly increase its realistic quality. And apparently the scientific imagination has to be called in at some stage or other of the process of

interpreting and utilizing facts for the guidance of new policies; hence no apologies are called for.

The Meaning of 'Balance'

The whole process is strongly suggested by the use of the concept of 'balance' in an early report of the Committee on Recent Economic Changes. The present writer was set at once to wondering what 'balance' means in this connection. What can it mean in an economy expanding rapidly and at different rates in its various constituent parts? Can a condition be conceived and described which would deserve the name 'balance', in which population is increasing, capital increasing more rapidly, product per capita increasing at still a different rate, perhaps in the long run intermediate between the other two,[1] technical methods of production changing as they must to utilize the increasing supply of capital per worker, older methods being constantly rendered obsolete (though not constantly in every process at once), and new goods being developed as the consequence of increased spending power resulting from increased production. This is emphatically not a static condition, and it is one to which the conceptions of equilibrium and balance can be applied only in a special and limited sense.

The term 'balance' was used by the Committee on Recent Economic Changes only in the sense of a

[1] Cf. discussion in Part III, p. 105.

rough approximation, with the idea of a 'zone of tolerance' beyond which disproportions become serious. The question remains, however, approximation to what? Tolerable degree of departure from what? In the discussion that follows, whenever the conception of absolute balance appears, it is not used with the idea that no departures from this absolute balance are tolerable in a working system. Indeed it will appear that absolute balance, even as an ideal, involves mutually inconsistent requirements in a moving world. The concept will be used merely in an attempt to define the standards from which the tolerable degree of departure is to be gauged.

It is clear that business cycles in their very nature are departures from balance in the absolute sense. So also are seasonal fluctuations, though these are easier to allow for and to absorb into a reasonably predictable scheme of working and spending. For the present purpose we may leave seasonal fluctuations to one side, regarding them as in the main within the 'zone of tolerance', though that does not mean that nothing further should be done to minimize them. From one standpoint, they might be regarded as assimilated into a balanced scheme if idleness resulting were minimized and the unavoidable remainder made up for by higher rates of reward in the more seasonal trades sufficient to provide an annual income not clearly out of balance

with those of other classes of workers or of property.[2]

As to business cycles, the question whether they are or are not within the 'zone of tolerance' is a question not of objective fact but of judgment. Such disturbances as the present are clearly outside such a zone, by any rational judgment. In this matter the chief service that can be rendered by a study of the conditions of balance is probably to show how movements in one feature of the economic system call for adjustments in other features; and how the condition we are accustomed to think of as balance in one field may imply lack of balance somewhere else, so that one or both will need to be revised in a synthesis that can fairly claim to be within the 'zone of tolerance' in all its features.

The idea of balance seems to have as its point of departure the idea of approximate equality of supply and demand, so far as this is consistent with movement and incentives for movement. But supply and demand for *goods* may reach momentary balance at very varying levels of price and of volume of production and employment. In that sense the present condition of depression might be said to be one of balance, though this is clearly true only in a most superficial sense. More fundamental is a balance between prices, costs and profits; meaning a state tending toward only such movements as can be sustained

[2] For fuller discussion, see the author's *Economics of Overhead Costs*, Chapter VIII.

without violent reversals. More fundamental still, perhaps, is a balance between supply and demand for *productive forces, especially labor;* in other words, freedom from undue amounts of unemployment. Millions of people with needs for goods, able and willing to work at producing things to satisfy these needs, and deprived of opportunity to do so, certainly represent an unbalanced condition between our productive powers and the need or potential demand for their employment.

The fact that supply and demand for goods can be balanced at present only at volumes of production that mean an intolerable amount of unemployment (lack of balance between supply and demand for labor) is evidence that the requirements of balance in the superficial and in the fundamental senses have not been harmonized, in our present system. It seems to indicate that the concept of balance is an incomplete concept, made up of elements which become to some extent incompatible under actual conditions. Perhaps the best we can hope for is a state in which the discrepancies between balance in different senses are compromised sufficiently to bring them all within the 'zone of tolerance'. This is what a piano-tuner does in adjusting the much smaller inconsistencies in the mathematical requirements governing the intervals of our musical scale. The result leaves differences in the character of compositions played in

different keys, which a trained musician readily recognizes.

A fundamentally balanced economy would be one in which the business cycle as we know it would have ceased to exist, or would be limited to rather mild fluctuations. It would be a state in which productive powers and productive opportunities would be reasonably well matched, and there would be no great discrepancies between supply and demand, and no great wastes of productive powers for lack of opportunity to use them.

Labor and Employment

The things to be balanced are many; but first and foremost we may consider the supply of labor and the volume of employment, recognizing that they are dependent in turn upon a network of conditioning factors which will have to be separately considered. But before we can go on to consider them we are faced by the baffling fact that we cannot say offhand what percentage of complete employment should be taken as constituting balance in this one field. Even in this one matter, such concept of balance as we have is probably made up of incompatible elements. Industry is adjusted to an excess of unemployed labor in normal times; and in any dynamic economy based on free enterprise such a margin plays a considerable part in facilitating the starting of new enterprises and the expansion of existing

ones. The role it plays may not be indispensable, but it is at least part of the provisional scheme of 'balance' to which we are accustomed; the balance between active and reserve workers. In another and probably more fundamental sense it represents a lack of balance.

This quota of unemployed is, in the necessities of the case, a shifting personnel—otherwise its members could hardly exist. Those who are occasionally or chronically among the number must, to that extent, be irregularly employed; and as the personnel is shifting, this means irregular employment for a larger number than is unemployed at any but an extraordinary time. Unless this reserve army can be kept down to smaller proportions than heretofore, we must accept the existence of irregular employment for a material fraction of the wage earners as part of our working approximation to 'balance', though not a satisfactory part. The underlying lack of balance which it represents will never be universally accepted as coming within the 'zone of tolerance' in the long run.

The state of employment in times of active business, while it never absorbs all the workers, absorbs too many for 'balance' from the standpoint of the employer's satisfaction with the quality of his working force. He expects to choose among the candidates and reject those who do not come up to standard. Super-active business involves a lowering of these

standards, and discipline and the quality of work suffer. At other times, the worker's fear of losing the job is one of the forces helping the employer to restore discipline. From this standpoint, balance may mean sufficient unemployment to give the employer some benefit from the worker's fear of losing the job, and not so much as to breed dangerous unrest.

Possibly no employer formulates the matter in quite this cold-blooded way. Certainly the more progressive have advanced beyond this standard to the extent of taking active measures to reduce the amount of casual employment and to further the placing of handicapped workers. Many probably recognize unemployment as an evil and a waste, without fully realizing the extent to which their own systems of discipline and incentives are dependent on it. They may use disciplinary discharge only as a last resort, and still benefit unconsciously from the workers' fear of losing their jobs through layoffs occasioned by scarcity of work. As the issue comes more and more to be faced, employers must more and more revise and develop their systems of discipline and incentives in harmony with a greatly lessened volume of unemployment. Only so can a scheme of balance be developed deserving of the name, from the standpoint of the social scientist. And it may be that such a scheme, involving greatly increased regularity of employment, would for that very reason bring out the problem of the unemploy-

able worker in a form which would make some effective community action necessary.

Thus balance in the labor market is hard to define, and harder still to visualize in terms of the concrete conditions necessary to bring it about. Fairly regular employment for all reasonably qualified workers seems, however, not a fantastic standard to set in the long run. Anything short of this leaves vast productive forces out of balance, as well as serious forces of social discontent. Our failure to achieve this standard is a result of causes which need investigating. Presumably it results from a lack of balance elsewhere in the system.

A balance between supply and demand for labor depends, among other things, on a reasonably steady rate of production in general. It is not proved that steady production would of itself guarantee the absorption of surplus labor, though the long-run forces of supply and demand would be working in that direction. But it seems clear that reasonably steady production is a necessary condition—that without it there will inevitably be chronically repeated periods of wide-spread unemployment.

Steady Production: the Individualist Prescription

Steady production is, from one standpoint, merely a corollary of the general assumption of balance between supply and demand, since the total supply of labor and capital is comparatively steady, and can

be in perfect balance with demand only when demand absorbs it all. This is theoretically possible, because effective demand is itself the reflection of the volume of production; and is potentially capable of absorbing more goods than we have yet produced. From the extreme individualistic standpoint, steady production with full utilization of our productive powers is merely a matter of producing the right things, setting prices on them which will move them off the markets, and adjusting the charges for the productive factors at levels that will induce employers to make use of them.

In other words, if there is difficulty in maintaining full production, the logical individualist would say: do not maintain prices. Slash them without limit until full production is restored, for all except the high-cost producers who may fall by the wayside. If there is 'technological unemployment', do not maintain wages. Slash them until the worker can compete with the machine and the employer can afford to hire him. Then the employer's own competition for labor and materials will put an end to the slashing sooner than anyone expects, equilibrium will be restored with full production instead of curtailed production, and the people will be the richer. If demand in some industries is so limited that full employment can be had only at cut-throat wages, the workers must offer their services elsewhere. It is possible that a country in which such policies were

actually followed would suffer less from depressions than does the United States in the twentieth century. It might produce more and consume more. But as to whether it could assure itself full and steady utilization of its productive powers by this method, there is room for doubt. The question is not simple.

If prices, wages and profits all fell in harmony, nothing might be accomplished. And if wages fell more than the other shares, might there not be a cutting-off of markets for consumers' goods which would defeat the purpose of the whole process? There is need of a balance between the portion of income spent for consumption and the portion saved, and this will be disturbed by any sudden shifting of incomes from wage and salaried workers, who spend most of their incomes, to profit-takers, from whom the bulk of the savings comes.

Savings and Capital Expenditures

If all savings were automatically and promptly spent for goods of some sort—capital equipment and raw materials—then the question might not be so urgent. The total demand for goods would be the same whether savings were large or small, and expenditures would equal production. But this does not automatically happen. There are a number of steps in the process, and they must maintain balance among themselves if the total volume of savings is

to be always equal to the volume of net expenditures for capital goods. Original savings are supplemented at times by the expansive power of the credit system. Government may borrow a part, or may repay past borrowings.[9] In the latter case, the volume of funds seeking productive investment is greater than the volume of original savings. Or if savings exceed the momentary requirements of business, they may flow into the stock market and send it upward, creating profits, some of which are spent for consumption, so that in effect part of the savings is diverted to consumptive expenditures, while the expansion of credit more than makes up the diversion. The savings that flow into a booming stock market are not obviously equal to the resulting expenditures on factories. Thus arise discrepancies between savings and expenditures for capital goods.

In the long run, perhaps, there must be a balance. If purchases of capital goods run ahead of savings, they must be liquidated out of future savings; and if savings are not put into capital goods of some sort they will not remain in existence. But the temporary discrepancies are enormously important; and it appears that they may endure over more than one short cycle. Since some discrepancy is very likely inseparable from any upward or downward inflection of the course of business, the problem is one of keeping them within reasonable bounds.

A Stable Credit System versus Cumulative Movements

The chief conditions requisite in order that expenditures may equal incomes may perhaps be summed up in the formula of a non-fluctuating credit system. But that is not the same thing as saying that this condition can be brought about simply by the policies of banks and other credit institutions, still less by the agencies of central control which we now possess. They cannot force industry to absorb credit against its will, when there is no apparent profitable use to which the funds can be put. And to regulate the demand for credit, as well as the supply, is another way of stating the basic problem of regulating the expansion of industrial production.

One phase of this problem of stable credit and its effect on economic equilibrium is illustrated by the condition so often assumed in the type of economic theory which deals with conditions of equilibrium: namely, that if more is spent on one thing, there is just that much less left to spend on something else. If more is saved and invested, just that much less is left to be spent on consumption goods. If this condition were realized, movements in particular parts of the economic field would be more quickly self-limiting than they are in fact, while general disturbances of the whole volume of production and consumption could arise only from powerful outside

forces. They could not be self-generating. Development would also probably be slower than it actually is.

As the system actually operates, spending more on one thing is quite likely to mean spending more on other things also, and *vice versa*. This is by reason of the combined action of two basic causes. One is an elastic credit system, which makes it possible to spend more for one thing without at the same time spending less for something else. The other is the fact that setting more people at work making any one thing gives them more spending power to use in buying other things so that the result is not less demand for other things, nor even the same amount as before, but actually more. If more is spent for capital equipment, more will also be spent for consumers' goods, not in spite of increased capital expenditures but because of them. A balanced economy must somehow get rid of this element of cumulative piling-up of impulses, or at least keep it within reasonable bounds, by controlling either its causes or its effects.

Long-Run Problems of Distribution of Incomes

When this condition is achieved, the worst instabilities in the demand for labor will have been removed. There will remain the question whether the rates of wages, and the relative costs of labor and capital, are such as to call into use the whole supply

of labor. This depends on two factors. One is the total demand for goods, which is governed by the total volume of purchasing power currently spent, whether it comes from income or from credit. The second is the proportions in which it is economical for employers to use capital and labor, as governed by their relative costs at current rates of wages and of interest.

High wages have two effects, if carried to the point at which their increase exceeds that of the productiveness of industry. They tend to increase expenditures and decrease savings, by putting more of the nation's income in the hands of those who will spend a larger part of it for consumers' goods, and spend it more quickly. But they also tend to make labor more expensive, and so to increase the incentive of the employer to use more capital per worker: in other words, to replace some labor with machines.[3] Lower wages have the opposite effect in both these fields. In an economy where all savings were spent at once, low wages would not reduce total spendings, but would make labor more economical to hire, as compared with increased use of machinery. The resulting decrease in the effective demand for capital

[3] Theoretical objections have been raised to this proposition, but they do not appear sufficient to destroy its validity in the existing situation. The present writer has dealt with them briefly in Inductive Evidence on Marginal Productivity, *American Economic Review,* XVIII, 452, September, 1928. Full discussion at this point would lead the argument too far afield.

would reduce its price, until an equilibrium was reached.

In our actual economy, immediate expenditures on capital equipment depend more on the business man's demand for capital than on the supply of original savings, the elasticity of credit taking up any temporary discrepancies, while the price of capital is decidedly sluggish in its movements. In this situation, lower wages are likely to reduce the total amount of current spendings without greatly altering the price of capital or doing anything else to change materially the proportion of labor and capital which it is economical for the employer to use. These proportions are slow to change, being largely fixed by the character of capital equipment accumulated in the past. Thus it is possible that lower wages may in their immediate effect do more to decrease the effective demand for labor than to increase it. They may defeat their own end by reducing the immediate volume of spendings.

There is a real unsolved problem here; whether there is an incompatibility between the rates of wages which are necessary to make it profitable for employers to give labor full employment, and the high wages which are being commonly advocated as means of maintaining purchasing power. Can purchasing power be maintained only at rates of wages which are so high as to bring about 'technological unemployment'? The post-War trends in this country

may be construed as evidence of failure to solve this dilemma. Possibly we shall not solve it until we reach a condition in which wage earners receive a larger share of the national income, in forms which do not constitute a wages-charge upon the employer's act of hiring them: in other words, until we achieve the goal of a capitalism in which everyone is a capitalist, or some other system which accomplishes the same result.

In the meantime, and with reference to the problem of cyclical fluctuations, stabilization of employment through stabilization of demand appears both more promising of success and more consistent with the long-run requirements of a stable economic order than attempted stabilization through unlimited slashing of wage rates. Particular wage rates may be too high for balance, and may need to come down. Others may be too low, enabling inefficient employers to survive whose business should be transferred to more competent ones, who could pay higher wages. And the automatic raising of real wage rates which sometimes occurs when prices fall during a business recession and money wages lag behind is clearly an unbalancing factor occurring at the wrong time and having nothing to do with the requirements of economic equilibrium. It tends to aggravate unemployment and thus to lower real earnings of labor as a whole, as distinct from hourly or weekly wage rates for those actually employed.

New Goods

The absorption of available productive power may be a matter not merely of stimulating demand for existing goods, but also of developing new goods on which increased purchasing power may be spent. A rapidly advancing system cannot bring productive power and demand into balance without large and continual developments of this sort.

The characteristic history of new goods is that they are used first by the wealthy or well-to-do, serving to enlarge their consumption, and afterward spread to the lower income-groups as increased output and improved processes bring cheaper production, and as the expanding incomes of the members of the lower income-groups make it possible for them to enlarge their spendings. This whole process takes so much time that it cannot be crowded within one short cycle, though the last phase of it may make marked progress during any one expansion of business. Without this last phase, the process cannot have very large effects on business as a whole; and this final stage requires a widespread distribution of the gains resulting from increased productive power, not a concentration in the hands of the well-to-do minority. At any given time, the greatest possibilities for quick expansion lie in increasing the incomes of those who are just below the level which makes it

possible for them to become large buyers of goods which have already been developed.

The basic problem here can be formulated as that of balance between expanding productive power and the rate at which the development of the corresponding expansion of our standard of living can go on. This expansion involves the development of new goods and of demand for them, and of such an amount and distribution of purchasing power as can make the demand effective and assimilate the new goods approximately as fast as we gain the power to produce them.

Hours of Labor

If we fail to develop consumption sufficiently to absorb our increased productive power, there is still another method of bringing about balance: namely, by reducing the hours of labor. But if this means forcing workers to accept a six-hour day and six hours' pay when they would rather work eight hours for eight hours' pay, it still leaves the length of the working day out of balance. Such a forcible reduction is essentially an emergency measure for distributing unemployment, not a permanent means of eliminating it. We may call this policy 'work-sharing'. It is quite different from the normal downward trend of the working day or working week which arises from the collective choice of the workers and has the effect of giving them part of the gains

of increased production in the shape of more goods and part in the shape of more leisure. In this latter movement, a gradual shortening of the working week is accompanied by a gradual increase of real wages, not a decrease, as when men work part-time to distribute unemployment. We shall not have achieved true balance until these two standards come together; until the working week at which labor can find full employment is the same as the working week which the workers would freely choose in the course of their bargainings, and which carries with it as an ultimate effect an implied balancing of the value of more goods against the value of more leisure.[4]

Of course, if there are going to be industrial fluctuations, no given length of working week will solve the problem. In that event, there might be a system in which work-sharing is used to spread the effect of

[4] Mr. F. W. Thornton, who has read the manuscript of this study, comments to the effect that workers will commonly strive for shorter hours for the trade in general while at the same time trying to get longer hours for themselves as individuals. They feel that the ultimate adjustment of wages to a longer or shorter standard week is not the same as the effect of longer or shorter hours for an individual in a given setting of standard hours and wage rates. In the latter case it is obvious that more work means more pay; while in the former case shorter hours are not expected to mean proportionately decreased pay, nor even the foregoing of proportionate increases in pay which could otherwise be had. The discussion in the text refers to the fixing of standard hours: a choice in which the ultimate effects on consuming power are admittedly obscure in any given case, but which represents a dominant force to be reckoned with.

the fluctuations, so that they shall mean variations in hours worked by all who would normally be steady workers, while the average working week is itself normal. Or we might have a system in which the working week is rigid and all the fluctuations are taken care of by laying off workers so that the effect is concentrated on a minority—to pass over the danger some are contemplating, that the minority of unemployed may become the majority. Or we may have a system in which the buyers' market for labor is used as a lever to secure concessions from workers in various phases of working conditions, including longer hours, with the result that a given shrinkage of business leads to an even larger percentage of jobless workers. This is the worst system of all. It represents balance in one very limited respect, at a sacrifice of balance in more fundamental and important senses. It is clearly outside the 'zone of tolerance', yet in some measure this wrong course appears to have been followed during the current depression. In fact, the habitual and prevailing system might be characterized as mainly the second, or rigid-week system, with some admixture of the first and third; and a deal of advocacy of a fourth; namely, work-sharing that would be permanent rather than temporary.[5]

[5] Since the above was written, the national recovery program of 1933 has instituted a deliberate drive toward work-sharing without reduction of money wages, but in a setting of depreciating currency and expanding public works.

As things stand, some cannot have all the goods they are willing to work for, because they cannot get full-time employment, and this in turn is because others are in the same position and therefore cannot spend. Or if some still have a normal income, they have not been offered the goods which will tempt them to spend a sufficient portion of it, while the amounts they save are not fully spent, or are spent on wasteful duplication of existing equipment, because industry has not developed either the technical forms of equipment or the new goods necessary to put the available productive power to work effectively. This seems to constitute a vicious circle, of which the unemployed are the victims.

Balance between Savings and Economic Exploration

If we are not ingenious enough to find what we wish to do with our new surplus of productive power, it may be wasted. If we try the wrong things, we have wildcat industries. If we do not try anything, we have 'technological unemployment'. 'Balance', under these conditions, involves the development of new standards of capital equipment adapted to changing proportions of capital to labor, and the direction of the increased productive power into making those commodities which are going to be desired by a population with more money to spend. The penalty for guessing wrong seems to be that, through the effects of unemployment, the popula-

tion has less money to spend instead of more. In order to produce the happy state of 'balance' we must guess right, or find our way to the right answer by a process of trial and error that is not too wasteful. And it may well be that the voluntary savings of a rich nation tend to pile up faster than this process of trial and error can find how to make real use of them and that this condition may last for a considerable term of years. The post-War years in this country may very well be an example of this kind of a failure of balance.

We need, then, a balance between the rate of savings and the progress of economic exploration in the widest sense: exploration into more productive forms of capital and into new goods to make with it; into new standards of living, new levels of wages and new standards of leisure expressed in a shorter working week. All these are bound together in an interacting network, and all must be adjusted to one another before we can use all the productive power we have. At present we seem to be far short of that goal.

The amount of capital we can man is fixed only in terms of existing technical methods of production and types of equipment. In the long run it is indefinitely expansible, but only at a limited rate, because it requires new forms of capital, new goods and possibly other new adjustments. With a given labor supply, the forms of capital determine the

amount of capital that can be manned. Some increase of capital can always be adapted for use by the existing labor supply through the employment of new forms that are already known; but any large increase involves much work for the engineers in developing new forms into which it can be fruitfully put, otherwise it would mean mere wasteful duplication of facilities which could be neither manned nor worked to capacity, and hence would be totally unproductive. It seems probable that a great deal of capital is consumed in this totally unproductive fashion, the fact being concealed because the resulting idleness of capital is distributed and does not all fall on the new capital.

The business cycle undoubtedly intensifies this effect, because the period of prosperity is a special stimulus to the building of surplus plants; moreover, capital construction is greatest at just the time when managers are paying less attention to the search for new and economic methods than they do in times of depression. The search for new methods, which goes on with extra intensity during a depression, prepares the way for a new wave of building, but only after an appreciable period. It seems clear that this wasteful duplication is not consistent with a state of balance; but the mere waste of capital may not in itself be as serious as the fact that it proceeds by spurts, resulting in irregularity which wastes labor power as well.

One requirement of balance, then, is a rate of development of new forms of equipment (and of new goods) sufficient to absorb a normal supply of savings without wasteful duplication of existing plants. A further requirement may be sufficiently low capital costs, especially interest charges, to make the use of these new forms of equipment economical. It is surely a lack of balance if interest rates are maintained around five or six per cent when new capital is being put to uses whose economic product for our economy as a whole is zero, or even less, while the facts of the case are masked in the way already indicated, by the ability of the new capital to capture some of the business which existing capital, equally efficient, is perfectly capable of handling. Balance would seem to require a lower rate of interest, low enough to make it economical to put capital to uses that frankly promise a low yield. Along with this condition goes the requirement of checks on wasteful duplication.

Over-equipment is to be judged on the basis of quality. Over-equipment in a serious sense exists when there is an over-supply of equipment of standard quality or sufficiently near standard to make its idleness for a considerable part of the time wasteful. On the other hand, much equipment that is too old and inefficient to be economical for continuous use may yet be economical to keep in reserve to handle occasional peak demands. Because of the high cost

of operating such equipment a normal market is not demoralized by it, while, for purposes of occasional use only, this high operating cost is balanced by the fact that the equipment represents little or no capital value and can stand in reserve for long periods without piling up an unduly heavy burden of 'idle overhead'. Such reserves might be required in particular industries and to meet emergencies, breakdowns and seasonal fluctuations, even if industry in general were so stabilized as to remove cyclical fluctuations. For this reason business estimates of the amount of excess capacity must be taken with a grain of salt until some method is found of determining how much of the equipment is of the sort that can stand idle part of the time without real waste.

Over-Concentrations of Activity

One essential feature of balance is that no part of the economic system shall be working at a rate very much faster or slower than it can continue without outrunning or falling behind its proper proportion to the rest, as fixed by physical and economic forces. The rate of production of raw materials should equal the amount consumed in the production of finished goods (with allowance for the slow growth of stocks as total volume of production grows). And the rate of production of equipment should be such as the volume of savings and the development of technical methods indicate can be maintained. We have seen

that there is no limit to the amount of capital that can ultimately be used, but that there are very narrow limits on the rate at which existing capital can be increased without wasteful duplication and a defeating of the end in view. If the industries producing capital goods are working at more than the rate which, if steadily maintained, would create all the capital permanent savings will finance, or all there are workers to man, or sufficient to produce all the goods the market can be geared to buy in the near future, then they are working at a rate which cannot, in the nature of the case, be permanently maintained.

The amount of consumers' goods the market can be geared to buy is elastic, and we have never reached its ultimate limits. But, like the amount of capital we can man, it can be increased only at a limited rate. The market will buy as much as it can produce if it produces just the commodities wanted by those among whom the income is divided, and if they spend for consumption all the funds not needed to finance a balanced supply of capital. But all this takes time to work out.

The market cannot permanently buy just the assortment of goods it is turning out in a period of booming business. At such times it is spending too much on capital goods and on durable goods in general to maintain the rate permanently, technical methods and knowledge being what they are. To maintain such a total rate of production, income

should be so handled that expenditures would go more to consumption goods and less to capital expenditures. As a country, we should spend more and save less than we do at the height of a boom. This conclusion follows from the fact that we reach our highest rate of expenditures for consumption only when we are also diverting more of our productive power to capital goods than we can permanently use. Hence we never reach the rate of consumption that our productive power makes possible. If we were to produce capital equipment steadily at a rate we could absorb, and devoted all the rest of our productive energy to goods for consumption, our consuming power would be increased, possibly five per cent. But apparently the only way to make us voluntarily spend as much as this, and save as little (when we are prosperous), is to distribute our income more equally than it is now distributed, and that, as we have seen, raises many problems. Another factor which will affect the amount of capital that will be built up from savings out of a given social income is the development of social insurance. This means larger provision for future needs, but by a method which will in the long run build up less capital in proportion to the amount of provision made for the needs of the beneficiaries. This is because the beneficiary ultimately receives both interest and principal to spend, instead of keeping the principal permanently invested.

If wages kept pace with total incomes in the upward swing of a business cycle, instead of falling behind as they typically do, more would be consumed. But would this mean a reduction of the unduly concentrated production of capital goods, by reason of a reduction of savings, or would it stimulate this concentrated production still further, because the increased demand for consumption goods enlarges the apparent field of profitable investment in instruments of production? Under such conditions the necessary financing could be furnished by an expansion of credit if original savings were insufficient. The latter result seems more than probable. And this points toward the conclusion that changes in the distribution of incomes are not alone sufficient; they can be effective only in connection with direct stabilization of those branches of production in which undue fluctuations are concentrated.

Movements of Prices, Money Values and Profits

In the realm of prices and money values generally a state of moving balance has its requirements. A fairly stable price level is one. Absolute stability is probably of no more than academic interest; but if there is not approximate stability, then there must be a condition in which all parts of the price system, and especially elements of cost of production, change harmoniously and promptly with changing prices and price levels, so that the interrelations of

the parts of the price system shall always be those which balance requires. Rising general price levels should not in themselves produce general profits or falling prices cause general losses. Industries marked for relative decline should not show profits on account of a change in the value of money, which may lead to unsound expansion. Industries marked for more than average expansion should not experience losses due to falling general price levels, which may lead to unnecessary contraction.

The ideal condition is one in which expanding industries receive just sufficient profits to stimulate the growth that will bring productive capacity into balance with demand; no more and no less. And contracting industries should suffer just sufficient losses to bring about a contraction in the productive capacity engaged in them adequate to restore the balance in the other direction by causing the least efficient producers to drop out, and others to defer expansion or to contract by failing to make full replacements. This does not necessarily mean losses for all producers, if the least efficient respond quickly enough to their losses and retire while these are still moderate. But with the growing proportions of fixed capital and the corresponding proportion of overhead costs, a condition of general losses is more and more likely to occur before there is sufficient outflow of productive capacity to ease the situation.

And if business becomes hardened to living

through cyclical depressions, limiting output and holding on to await the revival, this habit interposes an added obstacle to prompt adjustment when long-run conditions call for a contraction. The meaning of losses becomes confused by the merging of the two kinds of movement, and appropriate action is obstructed. Thus the shorter cyclical fluctuations of industrial activity are not merely in themselves examples of lack of balance; they also tend further to obstruct the action of the longer-run forces. If prices are pegged—meaning always certain particular prices—this tends to perpetuate a state of over-equipment, as well as to prevent a recovery of demand, and keeps the price system at large unbalanced.

Other Points

One condition, helpful but probably not essential, is a reasonable balance between the effects of diminishing returns in agriculture, and the fact that, as per capita wealth increases, we do not expand our consumption of raw farm products as fast as our production and consumption of the utilities supplied by manufacturing, transportation, trade and professional and other services. If diminishing returns brought about at least a relative decline in the efficiency of human effort in agriculture as compared with other branches of production, at the same time that the products of agriculture made up a smaller and smaller fraction of the increasing national divi-

dend, the result might be that something like a constant proportion of the population would be required in agricultural production. If agricultural efficiency increases as fast as the average of all economic operations, then there will naturally be a relative decline in the agricultural population. So long as this is only a relative and not an absolute decline, it may not constitute a very serious departure from balance, though even a relative decline may present some problems and difficulties. The expression that farming is a 'way of life' rather than a business indicates among other things a sluggishness of movement in response to economic incentives such that, if a large movement is called for, it is likely to lag until lack of balance becomes pronounced or even serious.

Some further specifications for the state of balance might be mentioned. The prices of securities should not fluctuate irrationally with respect to the long-run prospects of earnings, which in the nature of the case cannot fluctuate violently if the 'prospects' have any close relation to the facts. Foreign trade should rest on conditions of reasonable durability, not, for instance, on a basis of credit which is virtually certain to be rather quickly exhausted, or of tariffs which are morally certain to lead to reprisals. The war debts have thrown foreign trade out of balance. Temporary balance, apparent and not real, was secured by huge loans from this country. This was a paradox-

ical proceeding: we loaned because our economy was not geared to accepting real payment on loans already made. Having come to the end of this particular road, we face the search for some other route toward a new and more genuine balance.

Conclusion

To sum up, it appears that balance in the full sense is an unattained ideal, equivalent among other things to economic stabilization. A tolerable working approximation to balance calls for a much greater degree of stability than we actually have. The requirements of such a system are not simple, and they afford numerous and varied suggestions as to the important causes, both of cyclical disturbances and of unbalanced conditions of a longer-run sort tending perhaps to become chronic. The observed trends of the post-War period in this country seem to afford some evidence of the kinds of unbalanced conditions which this theoretical study would lead us to expect.

In the concluding section the results of this approach and of the previous inductive study will be consolidated and tabulated in the form of lists of the most significant and responsible factors that have appeared in both approaches to the problem. If the reader will consider these in the light of the foregoing discussion, he will see that the two methods of approach have yielded practically the same lists

of responsible factors. The chief difference is that the forces that tend to act progressively over longer periods than the forty-month cycle are emphasized in the second study, and their *rationale* investigated. This is natural, as the evidence on such matters plays a secondary part in the statistical records of the business cycle and contains within itself few hints as to the underlying causes at work. And on the other side of the picture, the abstract study of conditions essential to equilibrium frequently fails to yield clues to the time that various movements will need, whether falling within the limits of the short cycle or requiring a longer period. Hence this more purely theoretical study may be taken as corroborating the earlier conclusions, and supplementing them by more analysis of the longer-run trends and forces, thus giving them more nearly the emphasis that their importance deserves.