13. **The Cycle of Basic Income.** The purpose of this section is to

Social dividend

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inquire into the manner in which the rate of saving, ϕ, is adjusted to
the phases of the pure cycle of the productive process. Traditional
theory looked to shifting interest rates to provide suitable adjustment.
In the main we shall be concerned with factors that are prior to chang-
ing interest rates and more effective.

The simplest manner of attaining a fairly adequate concept of
basic income is to divide the economic community into an extremely
large number of groups *each* of practically equal income. Among these groups
it will be convenient to include a zero-income group composed of depend-
ents, the unemployed, potential immigrants, recent emigrants, the recently
deceased, and so on. In any group, i, let there be at any given time n_i
members; let each member receive an aggregate (basic and surplus) income,
y_i, per interval, so that the whole group receives $n_i y_i$; finally, let us
say that the group directs the fraction, g_i, of its total income to the
basic demand function, so that basic income per interval is given by the
equation,

$$f I' = \sum g_i n_i y_i \tag{39}$$

Next, let g_i increase by dg_i, n_i by dn_i, and y_i by dy_i in the immediately
subsequent interval. However, since the number of income groups is ex-
tremely large, it should always be possible to represent an increase or
decrease of an individual's income by his migration from one group to
another. In this manner dy_i may be assumed to be always zero, and so
one obtains for the increment per interval of basic income the simpler
equation,

$$df I' = \sum (g_i dn_i + n_i dg_i) y_i \tag{40}$$

where n_i includes the adjustment due to migration, *and*

where the component, $y_i dg_i dn_i$, is omitted as containing no new variable. We shall consider in turn variations in basic income in virtue of dn_i and variations in virtue of dg_i.

Since there is a zero-income group one may always regard the addition of members to one group as a subtraction from other groups and vice versa. This, in fact, is always approximately true but the presence of a zero-income group provides a locus in which all error is concentrated without leading to any mis-statement about income. Consider then the migration of an individual from any group, i, to a proximate but higher group, j. Three increments are to be distinguished: the increment in the individual's total income, $y_j - y_i$; the increment in his basic income, $g_j y_j - g_i y_i$; and the increment in his surplus income $[(1 - g_j)y_j - (1 - g_i)y_i]$. Now the higher any individual's total income, the smaller will be the fraction, g, of total income going to basic expenditure. Hence, in migrations from low to less low income groups, most of the increment of individual total income becomes an increment of basic income; but in migrations from high to still higher income groups, most of the increment of individual total income becomes an increment of surplus income. Evidently, then suitable migrations are a means of providing adjustments in the community's rate of saving. To increase the rate of saving, increase the income of the rich. To decrease the rate of saving, increase the income of the poor.

The foregoing is the fundamental mode of adjusting the rate of saving to the phases of the productive cycle. It reveals that the surplus expansion is anti-egalitarian, inasmuch as that expansion postulates that increments in income go to high incomes. But it also reveals the basic expansion to be egalitarian, for that expansion postulates

that increments in income go to low incomes.

However, this fundamental mode of adjustment is complemented by a further mechanism of automatic correction. When savings are insufficient, too much money is moving to the basic final market and so the basic selling price level rises; inversely, when saving is excessive, insufficient money moves to the basic final market and so the basic selling price level falls. This movement of price levels has a double effect: it contracts or expands the purchasing power of monetary income; and it shifts the distribution of monetary income to the higher or to the lower income brackets. The latter effect is less apparent but essential, for without it there results the upward or downward price spiral.

When, then, prices rise, there is no tendency, at least in the first instance, for quantities to contract. It follows that rates of payment expand proportionately to the rise of prices to give a very large increase to total outlay and income. Again, in the first instance at least, this large increase of income consists in speculative profits of the entrepreneurial class, and as one may suppose this class to be already in the higher income brackets, it follows that the increment of total income resulting from rising prices is an increment in the higher income brackets and so mainly an increment in surplus income. Thus, the mechanism of rising prices involves a shift in the distribution of monetary income in favour of the higher income brackets and so in favour of surplus income. This shift in distribution, of course, is achieved through increasing the money in circulation and not by decreasing the monetary income of other brackets. None the less, the equivalent of that effect is had by the reduction of the purchasing power of monetary income. Now the greater the rise in prices, the greater the increase in monetary income, the greater the increase in surplus income, and the greater the reduction

of the purchasing power of monetary income. Hence, a sufficient rise
in prices will always succeed in adjusting the rate of saving to the
requirements of the productive phase. No doubt, as prices rise, the
income groups increase their respective fractions, g_i, by some positive
increment, dg_i, and no doubt this involves a positive increment in basic
monetary income. But also there is no doubt that as prices rise, the
capacity of successive lower income groups to effect positive increments,
dg_i, becomes more and more negligible; the fraction, g_i, cannot be greater
than unity. Hence as prices rise, real saving is forced upon each lower
group; on the other hand, as prices rise, the consequent increment in
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speculative profits and so of surplus income is far greater than any
greater spending effected by the small numbers in the higher brackets.

The foregoing mechanism provides an automatic adjustment to an in-
creasing rate of saving. However, its operation is conditioned. Unless
the quantity of money in circulation expands as rapidly as prices rise
and, as well, as rapidly as the productive expansion of quantities requires,
there will result a contraction of the process: then, instead of adjust-
ing the rate of saving to the requirements of the productive cycle, the
productive cycle is arrested to find adjustment to the rate of saving.
Again, unless the increment in total monetary income goes to the higher
income brackets and so to surplus income, there will be no adjustment of
the rate of saving: the monetary income of the lower groups increases
as rapidly as the purchasing power of monetary income contracts; no real
saving is forced; and, ex hypothesi, there is no anti-egalitarian shift
in the distribution of income. It follows that basic income continues to
be excessive and so the basic price level continues to rise indefinitely.

These two types of failure of the automatic mechanism are inter-related. Banks are willing to increase the quantity of money as long as there is no appearance of uncontrolled inflation, but they curtail and even contract loans as soon as an upward spiral of prices menaces the monetary system. Thus, the root of the failure of the mechanism is the failure to obtain the anti-egalitarian shift in the distribution of income. In any first instance, rising prices effect that shift. But the trouble is that in every second instance organized labour can point to the rising prices as palpable proof of the rising cost of living and further can point to increased profits as proof of industry's capacity to pay higher monetary wage rates. Every delay in granting wage increases is of general advantage. On the other hand, every grant of such increases may indeed shift the burden of forced saving from industrial to other lower income groups but certainly causes prices to spiral upwards and so hastens the curtailment of credit.

So far we have been considering the adjustment of the rate of saving in a surplus expansion when that rate is increasing. There remains the opposite situation of the basic expansion when the rate of saving is decreasing. Then the problem that arises is that insufficient income is moving to the basic final market. There is at hand the same automatic mechanism as before. Prices fall. This fall has the double effect of increasing the purchasing power of income and bringing about an egalitarian shift in the distribution of monetary income. The increase in purchasing power is obvious. On the other hand, the egalitarian shift in the distribution of income is, in the main, a merely theoretical possibility. The fall of prices, unless quantities increase proportionately and with equal rapidity, brings about a great reduction in total rates of

payment. Receipts fall, outlay falls, income falls. The incidence of
the fall of income is, in the first instance, upon the entrepreneurial
class and so in the main it is a reduction of surplus income. Thus we
have the same scissors action as before: purchasing power of income in-
creases and the proportion of basic to surplus income increases; the
rate of saving is adjusted to the rates of production as soon as the
selling price level falls sufficiently. But just as there is an upward
price spiral to blunt the edge of the mechanism when the rate of saving
is increasing, so there is a downward spiral to have the same effect
when the rate of saving should be decreasing. Falling prices tend to
be regard{ng} as a signal that expansion has proceeded too far, that con-
traction must now be the order of the day. Output is reduced; the income
of lower brackets is reduced; the adjustment of the rate of saving fails
to take place; prices fall further; the same misinterpretation arises
and prices fall again. Eventually, however, the downward spiral achieves
the desired effect; surplus income is reduced to the required proportion
of total income; and then prices cease to fall.

An account of the crisis and slump will concern us later. The
present point is a very simple point. Just as the surplus expansion is
anti-egalitarian in tendency, postulating an increasing rate of saving,
and attaining this effectively by increasing, in the main, the income
of those who already spend as much as they care to on basic products, so
the basic expansion is egalitarian in tendency; it postulates a continu-
ously decreasing rate of saving, a continuously decreasing proportion of
surplus income in total income; and it achieves this result effectively
by increasing, in the main, the income of those who have the maximum
latent demand for consumer goods and services.

Previously I have suggested a lack of adaptation in the free econ-omies to the requirements of the pure cycle. What that lack is, can now be stated. It is an inability to distinguish between the signifi-cance of a relative and an absolute rise or fall of monetary prices. A relative rise or fall is, indeed, a signal for a relatively increased or reduced production. If the product, i, suffers a greater increment, positive or negative, in price than the product, j, then more or less of the product, i, than of the product, j, is being demanded. As prices are in themselves relative, in so far as they express demand, so also they must be interpreted relatively with regard to expansion and contraction. When both the prices of i and of j are falling, and i more than j, it may still be true that the production of both should be in-creasing, though with the production of j increasing more than the pro-duction of i. For the fall of prices may be general and absolute; as such it will result not from a change in demand but from a failure in income distribution to adjust the rate of saving to the phase of the pro-ductive process; to allow such a general maladjustment to convert a basic expansion into a slump is to cut short the expansive cycle of the pro-ductive process because one has confused real and relative prices with monetary and absolute prices. Inversely, the rising prices of the surplus expansion are not real and relative but only monetary and absolute rising prices; to allow them to stimulate production is to convert the surplus expansion into a boom. This, I believe, is the fundamental lack of adaptation to the productive cycle that our economies have to overcome. The problem, however, has many ramifications of which the most important is the relativity of the significance of profits. To this we now turn.

The traditional doctrine of thrift and enterprise looked
to the supply and demand for money to adjust interest rates
and the adjusted rates to adjust the rate of saving to the
requirements of the productive process. But it can be argued
that this view was not sufficiently nuanced in its estimate
of the requirements of the productive process, that it
missed the magnitude of the problem, and that it tended to
lump together quite different requirements.

The requirements of an expanding productive process
are that pure surplus income has to keep increasing in the
surplus phase of an expansion, that it has to keep decreasing
in the basic phase of the expansion, and that it vanishes when
the cost of replacements and maintenance absorb the whole
of surplus.

Again, it is true enough that increasing interest rates
are an incentive to saving but, at the same time, they discourage
borrowing; and similarly decreasing interest rates encourage
borrowing and discourage saving. But the requirements of the
surplus phase have to encourage not only saving but also borrowing;
and it would take enormous interest rates backed by all the
propaganda techniques at our disposal to bring about the ever
increasing rates of surplus income proper to the surplus expansion;
and some form of magic would be needed to prevent them from
discouraging all borrowing. What then is needed is the at once
rapid and effective decreasing purchasing power of money
that brings about "forced savings." And when inevitably the
surplus phase yields to its natural consequent, the basic phase,
the old watchwords of thrift and enterprise become counter-productive.
For then the thrift that is needed becomes less and less a matter
of expected surplus income and, while enterprise loses none of
its risk, it no longer lures people on with the attractions of the
surplus gain to be expected during the surplus expansion.

~~tive as the reduction of purchasing power by rising prices~~

But not only does the concept of an equilibrium rate of interest miss the magnitude of the problem. It also involves an indiscriminate lumping together of quite different things. One cannot identify a reduction of basic income with an increase in the supply of money, for a reduction of basic income is only one source of such supply; moreover, it is neither the normal nor the principal source of such supply; normally, surplus final products are purchased with surplus income which is just as much a circular flow as the purchase of basic final products by basic income; principally the increase in the supply of money is due to the expansion of bank credit, which is necessary to provide the positive $\int S'$ and $\int S''$ needed interval after interval to enable the circuits to keep pace with the expanding productive process. In the concrete problem under examination there is an abundant supply of money for all purposes; the one difficulty is that the division of income into basic and surplus is not parallel to the division of productive activity into basic and surplus; a general operation upon the supply of money seems to be a rather roundabout and inept procedure to correct an error in distribution.

The ineptitude of the procedure arises not only from its inadequacy to effect a redistribution of income of the magnitude required but also from its effects upon the demand for money. Four types of such demand may be distinguished: demand for basic final products; demand for surplus final products; demand for maintaining or increasing the turnover magnitudes of units of enterprise; and demand for redistributional purposes. The effect of rising interest rates on consumer borrowing will

be excellent as far as it goes; for it cannot but reduce consumer borrowing; on the other hand, one may doubt if such reduction is very significant, for an inability to calculate is a normal condition of consumer borrowing, and rising interest rates hardly exert a great influence on people who cannot calculate. The effect of rising interest rates on the demand for surplus final products is great: one may say that the initiation of further long-term expansion is blocked; to increase the interest rate from 5% to 6% increases by 10% the annual charge upon a piece of capital equipment paid for over a period of twenty years. Thus rising interest rates end further initiation of long-term expansion; on the other hand, expansion already initiated, especially if notably advanced, will continue inasmuch as an increased burden of future costs is preferred to the net loss of deserting the new or the additional enterprise. The effect of rising interest rates on turnover magnitudes depends upon the turnover frequency of the enterprise. If the frequency is once every two years, 1% increase in the rate of interest is a 2% increase in costs; if the frequency is once every month, 1% increase in the rate of interest is 1/12 of 1% increase in costs. Effects of the latter order are negligible when prices are rising. Indeed, then, even a 2% increase might be disregarded; but the combination of the 2% increase in costs with the uncertainty of what prices will be in two years' time is a rather powerful deterrent. The effect on turnover magnitudes, accordingly, is great when the frequency of the turnover is low but negligible when the frequency is high. Finally, as to the effect on redistributional borrowing, there are a variety of complications: gamblers on the stock market will continue to gamble; new flotations of stock will

be discouraged for the same reason as the purchase of surplus products; the international position of the country will be affected, a point from which the argument has prescinded so far and which can be considered only later.

However, the following conclusions seem justified. When the rate of saving is insufficient, increasing interest rates effect an adjustment. This adjustment is not an adjustment of the rate of saving to the productive process but of the productive process to the rate of saving: for small increments in interest rates tend to eliminate all long-term elements in the expansion; and such small increments necessarily precede the preposterously large increments needed to effect the required negative values of dg_i. Finally, the adjustment is delayed and it does not deserve the name of adjustment. It is delayed because the influence on increasing interest rates on short-term enterprise is small. It does not deserve the name adjustment because its effect is not to keep the rate of saving and the productive process in harmony as the expansion continues but simply to end the expansion by eliminating its long-term elements.