Monetary and Real Factors Affecting Economic Stability
A Critique of Certain Tendencies in Modern Economic Theory (*)

1. - Introduction.

It is the conclusion of the present paper that a large part of contemporary economic theory has laid undue stress on "real" factors and that "monetary" factors and the closely related phenomena of institutional price and wage rigidities have been neglected or their importance grossly underestimated. Instability in general economic activity as well as in the external balances of payments are explained in terms of physical rigidities, fixed coefficients of production, stubborn inelasticities of demand and supply instead of being attributed to faulty monetary arrangements and policies, to price and wage rigidities and similar factors.

2. - The Meaning of Instability.

Let me explain first what I mean by instability. I define it as fluctuations in aggregate output and employment. However, even with stable aggregate output and employment, price instability is possible in the sense of changes in relative prices as well as of the price level (in any one of the possible meanings of this ambiguous term). Price instability introduces instability in the income distribution which may well present very serious social and economic problems. Sharp changes in the terms of foreign trade, which are an especially serious matter for highly specialized primary producing countries, are an example on the international level. But there can be no doubt that in most cases violent changes in the terms of trade between large segments of the economy on the national or international level are the consequences or components of fluctuations in aggregate output and employment in the industrial countries.

For this reason I shall concentrate in this paper on the short run fluctuations — the business cycle in the industrially developed countries.

In the "underdeveloped" countries economic instability is to a very large extent either the reflection of the business cycle in the industrial world or the consequence of autonomous inflationary policies. Much has been made of changes in demand, technology and import policies of the industrial countries which may destabilize the external balances of highly specialized primary producing countries. Without wishing entirely to discount the importance of these factors, I venture to say, however, that from a global standpoint such sources of instability are of minor importance compared with the business cycle and inflation.

Inflation, to which I shall return briefly later in my paper, is by no means an unimportant matter. On the contrary, I am convinced that long run (continuous or intermittent) inflation not only introduces price instability but is also a factor seriously retarding economic growth. But intellectually the problem of rapid secular inflation (1) is much

(*) The present article is an abridged and slightly altered version of a paper read at the First Congress of the International Economic Association held in Rome, 6-11 Sept., 1956. The full text will be published in the proceedings of the Congress by Macmillan, London, 1957.

(1) The slow, creeping kind of inflation which is now going on in many developed countries is again a more insidious process, much harder to diagnose and to explain than the rapid, open inflation from which many under-developed countries suffer.
less challenging than the problem of the business cycle to which I turn my attention now.

Business cycles I take in the sense in which the term is used by the National Bureau of Economic Research—that is ups and downs in aggregate activity, more precisely in aggregate output and employment, changes in output due to changes in employment (3). Output can of course, change without changes in employment—harvest changes being the most important example. But the short run changes in aggregate output that constitute the business cycle are clearly not of that nature—which does not, however, exclude that crop changes as well as other exogenous disturbances may have great causal significance for the cycle.

I follow Mitchell and Burns in defining the cycle as the shortest observable fluctuations in activity. In their words, “business cycles vary from more than one year to ten or twelve years and are not divisible into shorter cycles of similar character with amplitudes approaching the longer waves.” Furthermore, I make no attempt at finding a regular sequence or pattern of “minor” and “major” cycles (as Hansen thinks there exists). Cycles do, of course, differ greatly in duration and enormously in amplitude; some depressions are mild, others severe; some upswings strong, others weak and abortive (4). But the more careful investigations in Measuring Business Cycles have convinced me that no regular and persistent pattern exists for an upturn has yet been discovered; that it is not possible to interpret the succession of cycles of different length and amplitude as resulting from the superimposition of independent or interde-

pendent cycles of different length (Schumpeter’s three cycle schema); that it is even less defensible to assign different quasi-independent cyclical mechanisms to the different superimposed cycles. Each cycle or depression is, in a sense, an historically unique case; that is to say it is the joint product of endogenous and exogenous forces. The result of the interaction between the economy and the historical environment and external disturbances is a complicated chemical compound and not a mechanical mixture whose constituent parts are separable by more or less mechanical statistical devices. The statistical decomposition of time series in cycles and trend is an insoluble problem (5). But this does by no means exclude that it is often possible to explain particular cycles or phases (depressions or expansions) in terms of exogenous forces or endogenous processes or to point to strongly intensifying or mitigating factors which explain the mildness or severity of a particular depression, or weakness or strength of a particular upswing. Let me mention only one or two examples—more will follow later. The intensification of the boom following the outbreak of the war in Korea does not require any further explanation than reference to the wave of Governmental and private spending engendered by the war (6). The great depression of the 1930’s in the U.S., whatever its deeper causes, was undoubtedly tremendously intensified by the collapse of the banking system.

It is disturbing that economists do not see eye to eye on all these matters. But we can take consolation in the fact that despite great divergences in the interpretation and explanation, different writers agree about the dates of cyclical turning points and about certain basic characteristics of the short cycle. For example, cyclical chronologies established independently by the most careful investigations of the N.B.E.R., by Edwin Frickey’s painstaking researches (7), and by Schumpeter’s more impressionistic methods agree almost entirely. (Divergences in the dates for turning points of a few months are hardly surprising and serious in view of the complexity of the underlying data).

While the contours of the short run business cycle are, thus, fairly clearly and generally accepted—further characteristics which throw light on the role of money in its causation will be discussed presently—the long waves which go under the name of Kondratiev cycles, secondary or trend cycles, are a much more hazy thing. They find their expression mainly in wholesale prices and interest rates. But the chronology varies considerably from writer to writer and from country to country; and it is not quite clear whether the up and down in prices are always associated—as they invariably are in the short cycle—with up and downs in output and employment.

It is better not to identify the problem of long run stability with a hypothetical long cycle—a phrase which suggests an endogenous mechanism and a degree of regularity that simply do not exist. We should rather think of the occurrence or recurrence at irregular intervals of rising or falling price trends stretching over several short cycles which may or may not be associated with similar trends in real output.

3. A Striking Characteristic of the Short Cycle.

One of the most striking and revealing characteristics of the short cycle is that the ups and downs in output and employment are closely correlated with ups and downs in price levels. A fortiori fluctuations in real magnitudes (output, employment, real income) are paralleled by fluctuations in money flows (money income, money value of output). It should be noted that this does not follow from our definition of the cycle which runs in real terms. Conceivably, prices as well as money values could be uncorrelated or negatively correlated with fluctuations in real output.

It seems to me that this actual, almost (8) perfect parallelism cannot be a chance phenomenon. In fact, an increasing number of business cycle analysts explicitly or implicitly agree that the proximate cause of fluctuations in output and employment is fluctuations in aggregate expenditure or effective demand. To be sure there is plenty of disagreement on the deeper forces and processes that are responsible for the cyclical fluctuations in aggregate expenditure. It is nevertheless highly significant that very diverse theories agree on the role of expenditure fluctuations. To this group belong not only the various types of monetary theories of the cycle, but also all the modern capital stock adjustment theories which rely on some sort of interaction of multiplier and acceleration principle.

(1) In identifying fluctuations in activity with fluctuations in aggregate output and employment, I deviate somewhat from the great masters of the National Bureau. The deviation is, however, slight because their cyclical chronology for “activity” is almost perfectly matched by the cyclical chronology in aggregate output and employment series.

(2) See Business and Prosperity, Measuring Business Cycles, p. 3. Sensational fluctuations are not of a similar character.

(3) This makes me doubt the usefulness of the averaging formula adopted by N.B.E.R., even with all the caution and reservations expressed by the Illustrious master of Measuring Business Cycles.

(4) The dollar turnover point following the mild recession of 1948-49 had occurred already in the middle of 1949. The war in Korea was therefore not necessary to pull the American economy out of a depression, but was superimposed on an upswing that had started independently.

to construct an endogenous oscillating mechanism and even Schumpeter’s theory, whose logical structure is entirely different, belongs to this group. All these theories explain in different ways why expenditures fluctuate in cycles; it is then easy to see how this produces cycles in output and employment — so easy indeed that the necessary assumption of some sort of price and wage rigidity is rarely made clear. Let me add that a very large part of currently employed methods of forecasting the future course of business consists of attempts to form a judgment on the probable course of various segments of the expenditure stream — business spending on investment (plant and equipment, inventories), consumer spending, Government spending, foreign demand, etc.

The proposition that fluctuations in aggregate effective demand or expenditure are the proximate cause of the business cycle does by no means imply that it is always monetary factors in the sense of active measures of monetary policy on the part of the monetary authorities or of the banks that bring about the fluctuations in expenditures. The line of causation does not necessarily always run from the monetary to the real factors, although it can hardly be doubted, in my opinion, that monetary factors do greatly contribute to cyclical instability and that, on the other hand, skillful monetary policy can help to counteract instability caused by real factors. Supply-side factors in the economic system were not subject to cyclical fluctuations; it would then be an easy task to produce by monetary measures a business cycle with all the familiar features of alternating periods of expansion and contraction in output and employment associated with ups and downs in prices and aggregate demand. All that is required to bring about such a result would be to expand and contract credit or to produce sufficiently large surpluses and deficits in the Government budget.

4. Real and Monetary Factors Behind the Fluctuations in Aggregate Expenditure.

In order to gain perspective let me briefly enumerate and survey various possibilities of explaining cyclical fluctuations in aggregate spending by “monetary” and “real” factors and their interaction — starting from cases of purely monetary causation and proceeding to cases of increasing preponderance of “real” factors.

At the one extreme we have the purely monetary explanations of the cycle which assume that the real economic system is inherently stable and that instability is introduced by misbehavior or mismanagement of money. It should be remembered that what may be purely monetary is the causal mechanism; the thing to be explained, the cycle, we have defined in real terms.

Of modern writers who have proposed purely monetary explanations, Irving Fisher and R.G. Hawtrey come at once to mind. Fisher flatly denied that there was such a thing as a cycle except to the extent that quasicyclical instability was introduced by monetary instability which he conceived in terms of changes in the purchasing power of money. Professor Hawtrey’s endogenous theory, consisting of a dynamic mechanism of lagged interactions of monetary circulation, cash drains, and credit policy of the banks, changes in short term interest rates inducing changes in inventory investment is well known (10).

Another school that explains the cycle by monetary factors starts from Wicksell’s distinction between the market or money rate of interest, on the one hand, and the natural or equilibrium rate on the other. Wickell himself did not hold a purely monetary theory of the cycle, but Mises and Hayek, to mention only two, did. They believe that the initiating cause of the cycle can always be found on the monetary side, on the supply side of money. Excessive supply of credit (that is to say, credit creation in excess of “voluntary savings” — the precise criterion of excessiveness not being always the same) depresses the market or money rate of interest below its equilibrium level; this starts a Wicksellian cumulative process which necessarily ends in crisis and depression.

In these monetary theories, which stress changes in the supply side of money, it is assumed explicitly or tacitly that the demand for money and credit, or to put it differently, the natural or equilibrium rate of interest is determined by the (physical) marginal productivity of capital which is fairly stable over time, although perhaps subject to a gradual downward shift as the capital stock increases.

Non-monetary factors make their appearance as soon as it is realized that the demand for money and credit (or the equilibrium rate of interest) is neither stable nor determined solely by the physical productivity of capital.

The main factors making for instability of investment demand, or in the terminology of the Wicksellian School, for changes in the equilibrium rate of interest (if we still permit ourselves under these circumstances to think of an equilibrium rate existing at any given moment) are as follows, arranged in the approximate order of increasing “physicalness”: “psychology”, i.e. waves of optimism and pessimism; investment changes induced by changes in income or consumption as postulated in the different variants of the acceleration principle (including that of Kaldor); inventions and innovations and the forces giving rise to the “bunching” of innovation- investment as described by Schumpeter; or lumpiness of investment due to the durability and indivisibility of capital instruments together with the asymmetry in the operation of the accelerator, the replacement waves and “echo effects” which follow from the fact that capital goods are durable; speaking of bunching and lumpiness of capital investment we cannot forget in the world in which we live the most powerful external factor causing intense concentration (and hence instability) of investment, namely, wars and preparation for war.

All these factors have been used, singly or in combination, to explain the business cycle. But in all these theories, although they are no longer purely monetary, monetary factors enter more or less importantly — and not only in the trivial sense that everything that happens in a money economy (as distinguished from barter) wears a monetary garb.

The theories which use the various building blocks just mentioned vary greatly not only in content but also as to the degree of formal refinement.

Let me first say a word on the latter aspect. The earlier theories have relied on verbal analysis and rough estimates of magnitudes. Since the pioneering article of Frisch, “Propagation Problems and Impulse Problems in Dynamic Economies” (11), Lundberg’s celebrated Studies in the Theory of Economic Expansion, and especially since the formal marriage of multiplier and acceleration principle (who earlier lived together under different names in ill-defined relationship), a great change has come over business cycle theorizing. The theory has been formalized in complete endogenous sequence models using difference and differential equations. The earlier models were linear but soon non-linear models with “shocks”, “ceilings”, “asymmetries”, “stochastic variables”, and “exogenous shocks” were added. Not only mathematical blueprints but full-blown econometric models relating to individual countries or even to the whole world with constants and parameters statistically evaluated are pour-
This surely is a very interesting development and this type of approach is undoubtedly worth trying and perfecting. But there can be hardly a doubt any more that so far the results have been most disappointing. The multiplicity of more or less inconsistent models, many of them based on broadly plausible assumptions and, if of the econometric type, fitting the data from which they are derived fairly well, but none of them standing up to the test of extrapolation beyond the period from which the data were taken — this is a spectacle that is not calculated to inspire confidence.

But let me return to the substantive questions concerning the role of monetary forces in the cycle. It would seem to be a valid generalization that purely monetary explanations have become increasingly unpopular and although most current theories are mixed in the sense that monetary and real factors interact, the monetary factor has been more and more deemphasized and relegated to a merely passive or permissive role.

Let me consider, as an example, Hicks’ classic Contribution to the Theory of the Trade Cycle — the most elegant and most carefully elaborated specimen of a great variety of similar systems. His principal model runs almost entirely in terms: Consumption expenditure is a function of real income; investment a function of the rate of change in real income; there is a physical ceiling which may or may not be hit and, owing to the physical impossibility of using up durable capital faster than it wears out, the accelerator is weaker on the downside than on the upgrade. Wages are supposed to be perfectly rigid and so are prices (with minor qualifications).

In the basic model money plays a purely passive role; monetary circulation automatically expands during the upgrading and automatically contracts during the downswing of the cycle (11). Money is a mere veil or rather a trivet (as Mises used to put it (13)) which faithfully reflects without distortion the contours of the economic body and all its changes.

Although Hicks regards the «real» model as the heart of his theory and the latter as an adequate picture of reality, he is too much of a realist to rely entirely on the «real» part of his theory for the explanation of actual cyclical experience. In the last two chapters of his book he introduces the «monetary factors» as a very active element and thus modifies his theory more drastically than appears on the surface or than he himself seems to admit. But let me spend a few more minutes on the «real» models.

Although in these models money plays no active role in the sense that no deliberate inflationary measures, or rising prices, falling interest rates or lowered credit standards are required to explain a cyclical upswing — nor the opposite of all this to account for the depression phase — money is nevertheless essential because the upswing could not proceed unless the supply of money were elastic in the sense that either M or V increased without an ups in the interest rates (14). If there is not sufficient scope for spontaneous monetary authorities must permit the necessary expansion in M; if V can expand it is sufficient that they refrain from counteracting the increase in V by contracting M.

The downturn is brought about entirely by the «real» mechanism and during the downswing the role of money is even less important than in the upswing; for while the monetary authorities can always stop or slow down an expansion they can do nothing or very little to soften a contraction (although they could presumably intensify it). When the «real» forces «decrease a contraction» MV shrinks inexorably and if monetary policy prevents M from shrinking (or expands it) the result is simply an offsetting drop in V.

There can be hardly a doubt that this account greatly underestimates the importance of monetary factors in producing the major cyclical swings of actual experience. What is open to question is the degree of distortion of the true picture. While I realize that many of those who have put forward real models of the cycle would be ready to admit that their picture of the cycle is liable to be changed somewhat by the operation of monetary factors, I still believe that modern theory has tended grossly to underestimate the importance of the monetary factors. Not only in the field of business cycles, but in other areas as well well alleged stubborn structural and «real» instabilities and impediments to necessary adjustment have been overemphasized and overestimated at the expense of monetary factors and the closely related element of price and wage rigidity. This is a matter of great importance which has farreaching policy implications (15).

5. Monetary Factors in Depressions.

The operation of monetary forces is especially conspicuous in depressions. But the need for depression are shown during the boom and they are not entirely of «real» origin.

Let me enumerate a few instances in which monetary factors have notoriously greatly intensified depressions although perhaps not brought them about.

(12) Monetary qualifications are, however, involved to explain one feature of actual cyclical experience which in Hicks’ opinion cannot be accounted for by his «real» model. He thinks that after the downturn the acceleration of export normally proceeds faster than the multiplier-acceleration mechanism would lead us to expect. So he introduces in an ad hoc manner what Ferguson many years ago in the International Princeton Report, said, which now we has kept remarkably fresh called the demobilization of the economy as a result of the war which follows an initial fall and goes back down after the acceleration of exports due to the multiplier mechanism. For this reason to remain Hicks was promptly ridiculed by Rudder who believes that also this particular feature of the cycle can be explained by the «real» mechanism.

(13) Nothing to say Mises did not accept the view that money was a mere trivet.

(14) It is true there has been a strong tendency to discount the importance of the interest rate but it has hardly gone so far as to deny that sharply rising interest rates would set a brake on the expansion.

(15) Thus it was necessary to «reconsider monetary policy».

(16) Then it was necessary to «reconsider monetary policy».

(17) See Fed. 80th's and «The Depression of Morale»

The same line of thinking was used independently by Fed. M. A. Hefley.
This explanation of the Great Slump has long been propounded by continental European economists, notably by the late Charles Rist, but has not found many supporters among Anglo-American economists.

Two general observations are called for. First, it should be stressed that price rigidity, which is in practice primarily wage rigidity, is an essential prerequisite of any monetary explanation. This remark must, however, not be interpreted to mean that everything would be put right and cyclical instability could be banished by introducing wage flexibility. The problem is much more complicated, because of the existence of fixed contracts and possible adverse dynamic and expectation repercussions of a perfectly flexible wage and price system.

Second, it is well known that throughout the 19th century the British monetary system operated on a very narrow gold reserve. This narrowness of the monetary base made for a very small credit policy, because it forced the Bank of England to react sharply to slight cash drains. Thus it contributed to monetary instability throughout the 19th century. The growing wage rigidity in the 20th century made that system unacceptable.

It is well known, although often forgotten, that monetary mismanagement, namely, the revaluation of sterling after the first world war, without the necessary wage adjustments, was responsible for the consecutive stagnation of the British Economy during the 1920's.

The Great Depression of the 1930's offers many parallels with that of the 1930's. It too was greatly intensified by monetary factors, both in the U.S. and in Europe. In the U.S. large budget surpluses followed the deficits during the Civil War and the premium on gold was gradually reduced from 57 percent in 1865 to 50 percent in 1890. The latter caused the depression—a situation in which many modern keynesians today see an analogy to the Great Depression. True, the general economic background—19th century U.S. vs. 20th century Britain—is entirely different, but the difference in the surrounding conditions makes the similarity of the outcome all the more remarkable and serves to support the hypothesis that the monetary factors were in both cases decisive importance.

These are conspicuous and notorious cases in which depressions have been intensified by monetary factors. Similar though less conspicuous and serious monetary disturbances entailing credit contraction, pessimistic expectations and inducement to increase liquidity (reduction in V) can be found in practically every but the mildest depression.

6. Monetary Factors During Business Cycle Upturns.

While it is, thus, easy to point to instances in which depressions have been greatly intensified by monetary factors and policies during the depression and while, following Pigou and Hicks, we may venture the generalization that in many less conspicuous cases than those mentioned the severity of depressions has been enhanced by monetary repercussions of financial crises, the role of monetary factors in the upswing and boom phase of the cycle is much more controversial and difficult to assess.

I take it that hardly anyone would defend wage rigidity, most economists would say that a 3 or 5% rate of increase is too much to deal with by definition rather than by cause of the currency—( Ricardo, State of the World, Vol. III, p. 72). Under 20th century conditions of

nowadays the proposition, and I certainly would not do so myself, that the tapering-off of the upswing and the subsequent depression could be avoided either by keeping M, or MV in some sense or some general price level constant. Hence the failure of money or monetary policy to conform to any simple rule cannot be held responsible for the fact that booms do not last forever and are always followed by depressions. But from the fact that it is difficult or impossible to discover a monetary rule which, if observed during the upswing, would guarantee permanent prosperity, it does not follow that the behavior of money or monetary policy during the upswing cannot greatly contribute to the severity of the following contraction.

The length and severity of depressions depend partly on the magnitude of the real maladjustment which developed during the preceding boom and partly on the aggravating monetary and credit factors already mentioned — the scramble for liquidity by financial institutions as well as by others, destruction of bank money by bank failures, and similar events on the international level.

While monetary arrangements and policies during the upswing probably cannot entirely prevent the emergence of real maladjustments—except perhaps by preventing the upswing itself—imprudent monetary policies surely can aggravate them; moreover, the financial crisis which frequently mark the downturn of the cycle and the monetary and financial complications during the depression are partly the consequence of monetary forces and policies operating during the preceding expansion.

The term « real maladjustment » must not be, interpreted in a narrow, exclusive sense (20). There are alternative types of such maladjustments and I do not wish to

suggest that there is a presumption that every boom breeds the same kind of trouble. Let me mention only two or three types.

The Hayek-Friedman theory (envisioned also by other writers) that when an expansion runs head on into a full employment ceiling (which need not be a rigid barrier but may be a flexible bottleneck zone) induced investments will collapse (22), describes one kind of real maladjustment.

Another type of maladjustment is the one described by Schumpeter. It can be characterized as a temporary exhaustion of investment opportunities in the particular area in which the boom was concentrated. The chances that there should be a general and chronic dearth of investment outlets for current savings (as distinguished from a temporary one in a particular area) are so remote and sub specie historiae so far-fetched that we can ignore them (23).

While these real maladjustments are closely tied up with growth and expansion itself and are most difficult to diagnose and to avoid (except by preventing the expansion itself), most upswings are characterized in varying degrees by excesses which at least postfactum appear unnecessary, undesirable and avoidable, even though it may be the case which separates them from the maladjustments mentioned earlier cannot always be drawn at least at the time when things are going well.

What I mean are speculative excesses in the real as well as in the financial sphere: overexpansion of the dollar as later developed in terms of gold. The speculative origins of the latter are not as bizarre as Hicks thinks; they usually amount to much more than the collapse of the bank system.

(20) On all this and for references to the contemporary literature see especially Viner, Studies in the Theory of International Trade, chapter 9.

(21) This estimate was correctly formed by Keynes in his pamphlet The Economic Consequences of Mr. Churchill, 1920.


(23) This does not, however, alter the fact that in every severe depression we observe an increase in the index of business and that the index of industrial production is, in fact, an index of industrial output and that the index of industrial production is, in fact, a measure of industrial production and not of industrial production. The latter is, of course, a measure of industrial production and not of industrial production. The latter is, of course, a measure of industrial production and not of industrial production.
Monetary and Real Factors Affecting Economic Stability

7. The Comparative Importance of Monetary and Real Factors in the Cycle.

My general conclusion is that monetary factors and policies play an important role in generating economic instability. A large part of modern cycle theory has unduly neglected monetary factors and overplayed the 'real' factors, although most proponents of a 'real' theory of the cycle find it necessary to bring in monetary factors as modifying elements at some stage before applying their theories to the cycle of the real world.

Let me now raise the quantitative question: Suppose that we were detailing monetary complications which I have enumerated could be avoided by institutional reforms and skillful monetary policy; would that dampen the cycle dramatically or would it make no difference? In other words, is the 'real' cycle without the so-called 'complications' really a very serious problem?

This is, of course, an extremely complicated question. I cannot hope in the course of one lecture to formulate it with all the care and precision which it requires, let alone to give a well-documented answer.

But let me make bold and suggest tentative answers to some subdivisions of the main query.

If the wholesale destruction of bank money during depressions through bank failures, runs on banks, lack of confidence in the financial institutions as well as analogous phenomena in the international sphere could be avoided - a modern minimum program of monetary reform - catastrophic slumps as in the 1930's would be eliminated. Avoidance of mistakes such as in the revaluation of the Pound after the first world war and a modest policy of monetary expansion (I am speaking now of monetary policy, not of fiscal policy, i.e. the creation of counter cyclical budget deficit in a depression) would make prolonged periods of semi-stagnation like that of the British economy in the 1930's extremely unlikely.

If, in addition to this, inflationary and speculative excesses during cyclical expansions were prevented and a mild counter cyclical budget policy adopted, cyclical instability would be damped down to moderate proportions. In other words, the 'real' cycle without the monetary 'complications' (comprehensively defined) is, in my judgment, a rather mild affair.

What are the chances that the monetary complications will in fact be avoided henceforth? I think that a majority of economists would agree that the chances are good as far as anti-depression policy is concerned. Runaway deflation, like in the 1930's, is, I believe, out of the question everywhere, even in the most capitalistic countries. More than that, as far as anti-depression policy is concerned, there is certainly more danger in most countries of too soon and too much rather than of too late and too little. Does that mean that we have reached the millennium of economic stability? Now, as far as employment is concerned, there is probably little chance anywhere of prolonged mass unemployment due to a deficiency of effective demand. True, this does not exclude unemployment due to a lack of cooperating factors. But dislocations where that happens on a large scale are exceedingly rare (24).

8. Secular Inflation.

But for other dimensions of economic stability than employment, for example, for price stability, the outlook is definitely not so good. The low tolerance for unemployment, the strong inclination to suspect an incipient major depression in every slight actual or imagined dip in economic activity, the high propensity to apply anti-depression measures all that coupled with the powerful urge to invest and develop, the constant pressure of organized labor for higher wages and, in some countries, of organized agriculture for higher prices, makes for secular, intermittent or continuous, creeping or galloping inflation.

Continuous galloping inflation is found in some underdeveloped countries - Chile is perhaps the most recent extreme example. There can be no doubt that it retards growth (through lowering the allocative efficiency of the economy and discouraging saving) even if acute depressive reactions can be avoided.

In the advanced industrial countries secular inflation threatens in the form of a creeping and intermittent rise in prices. That is to say, prices rise over the long pull at an average rate of a few percent per annum, not steadily but in waves, periods of rapidly rising prices being interrupted by shorter periods of stable or even slightly falling prices. This is an insidious process which is not easy to diagnose and on the consequences of which there is little agreement between economists, at least so long as the average price rise is not more than, say, 2-7% a year.

I am not going to speculate about the average annual speed and time shape at which secular inflation will begin to have serious consequences. I shall instead discuss one aspect of the causal mechanism which brings about this condition and one of its consequences on the international level.

As Bronfenbrenner (25) points out, there are two different explanations of the tendency in the industrial countries of the West towards secular creeping inflation. The one school blames the price groups of organized labor and organized agriculture; the other blames monetary policy which has become lax under the influence of the Keynesian thinking of our time. According to the first, the price level is gradually pushed up by rising wages; according to the other view, it is pulled up by monetary policy.

Money plays, of course, its role in both schemes. Labor unions could not push the price level up unless monetary policy gave way. It should also be observed that it is

(24) Such conditions existed after the war in one or two countries due to a lack of raw materials, machinery, and transportation. The specter of that kind of unemployment arose in some countries as in Britain during severe balance of payments crises; but it never came to pass. Some theorists have played with the idea that this kind of unemployment exists chronically (or is disguised) even in industrialized countries. It is based on the assumption of excessive coefficients of production, that is to say that capital and labor can be combined only in one or two fixed proportions (rectangular or at least angular production functions). Capital is scarce, much labor must remain unemployed. The assumption that such conditions should exist in the long run is far from being commonly defined industrial processes but for industry as a whole or locally or even for firms to some extent in the point of being perpetrated. It must be pointed out, however, that this same assumption underlies the famous Harrod-Domar model of long-run economic growth.

These theories constitute other extreme examples of the modern propensity to emphasize real factors and to look far real, in this case literally physical rigidities, instead of analyzing monetary factors, price and wage rigidities and the like. For an acute analysis of the Harrod-Domar model see L. R. Yaouana, "Some Questions about Growth Economics", in American Economic Review, March, 1959.

not necessary that labor be organized in one huge bloc (as it actually is in some countries) and force up the whole wage level in one big push. For the inflationary mechanism to work, it is a sufficient condition that big chunks of wages be forced up here and there by some of the large unions. The forces of competition and actions of other unions can then be relied upon rapidly to generalize these increases. Pull and push always interact once the upward movement has started. Thus the difference between the two schools seems to degenerate into one of the hen and egg variety.

But there remains an important operational difference. Although both schools agree that despite union pressure on wages the price level could be held, if monetary policy stood firm (as it had to under the gold standard), the pressure group school asserts (or implies) that if monetary policy does stand firm, wages (or some wages) will be pushed up anyway. As a consequence unemployment will appear and monetary authorities are then confronted with the dilemma either to "create" a certain amount of unemployment or to tolerate at least from time to time a rise in the price level.

The other school takes a more optimistic position. According to them there is no such dilemma. If the monetary authorities stand firm wages will not rise or will rise only a little. A small amount of unemployment or the threat of unemployment will suffici- ently persuade the unions to desist from wage demands in excess of the gradual increase in over-all labor productivity.

Given the fact that the tolerance for unemployment in our time is low, the difference of opinion between the two schools thus reduces to one's estimate of the power and policy of labor unions and employer reactions. Obviously much depends also on public opinion and government policy.

I am inclined to side on this issue with the pessimists (26). But this is certainly a


I now come to my last topic which dramatically illustrates the modern tendency to look for deep-seated structural defects and to see stubborn real stumbling blocks to the maintenance of stable equilibrium where in reality faulty monetary policies and the rigidity of certain key prices provide a perfectly satisfactory explanation for the existing disequilibrium or instability.

While in a closed economy with a unified monetary and banking system, free mobility of funds and a fair degree of mobility of labor, a secular inflation of 2-3%, per year may not have deleterious effects for quite some time, at least not clearly visible ones, in the actual world, consisting as it does of different countries with different monetary systems and policies, and no mobility of capital funds and labor between them, even a small deviation in the rate of inflation between different countries must almost immediately lead to balance of payments disequilibria.

What holds of differences in the degree of secular inflation is, of course, also true of deviations in timing and magnitude of cyclical

and other short run expansions and contractions. Analytically it is, moreover, only the one side of exactly the same problem, if the disequilibrium in the balance of payments has been caused initially by a shift in international demand (however brought about). In that case the persistence of the disequilibrium can be said to be due to the failure of the monetary mechanism to bring about an equilibrating divergence between the rate of expansion in the surplus country and that in the deficit country (27), while in the case mentioned before the disequilibrium in the balance of payments was caused by the appearance of a disequilibrating divergence of the same sort.

But let me concentrate on the chronic case, because it illustrates most clearly the point I wish to make, namely, the contemporary propensity to overemphasize "real" factors and to neglect monetary factors and institutional rigidities.

There is to-day much more agreement than there was a few years ago on the proposition that the basic reason for the chronic (continuous or intermittent) balance of payments deficit, alias "Dollar shortage", from which many countries are suffering is to be found in the fact that the countries have, for a variety of reasons, a higher "propensity to inflate" than the surplus countries. (It should be stressed, however, that it is grossly misleading to speak of a shortage of the U.S. dollar on the world market. The situation supplies just as much capital to the Canadian Dollar, Mexican Peso, Venezuelan Bolivar, Swiss Franc, more recently also to the German Mark, Dutch Guilder and other currencies which are more or less freely convertible into U.S. Dollars). The reasons for this high propensity to inflate are, of course, many. Some are of an "ideological", "political", and "social"

nature, others are deeply rooted in the recent or more distant historical development of a country; still others are very "real". It is, for example, easy to understand why for some time after the war it was almost impossible for war-torn and ravaged countries to restrain inflation (of the "open" or "repressed" variety); moreover, it stands to reason that countries with a low tolerance for unemployment, an elaborate social welfare establishment, exorbitant rates of direct taxation, aggressive trade unions, will constantly strain against the implicit and explicit limits of size of the "real" economy.

With such a wealth of explanatory material available which offers unlimited opportunities for bringing into play "propensities", "asymmetries" (28), "demonstration effects" and many other gadgets dear to the heart of the economic theorist, it is difficult to understand why anyone should find it necessary to fall back on such implausible and farfetched hypotheses as the sudden appearance in the fourth decade of the 20th century of stubborn real inelasticities of international demand (of whole continents and a great variety of countries) or on the equally bizarre theory that, again beginning in the third or fourth decade of our century, balances of payments (and terms of trade) must turn inexorably in favor of the most rapidly progressing countries.

10. Summary and Concluding Remarks.

My main conclusion is: Monetary factors comprehensively defined bear a heavy share of responsibility for short run economic instability — for the ordinary business cycle (again comprehensively defined) as well as for the

(26) Borrowing from you (op. cit.) is the pessimistic side and we is the Data of America's labor unions", S. B. Slicher, "The optimistic view is represented by members of the
inflation and chronic disequilibria in the balances of payments.

By monetary factors I do not merely mean active policies of inflation or deflation — the latter having become almost inconceivable since the Great Depression and the rise of Keynesian thinking — but also monetary repercussions of financial crises which frequently mark the upper turning point of the cycle or occur during the downswing — irrespective of whether the downturn itself can or cannot be attributed to monetary factors. For example, the collapse of the American banking system in the 1930's, the downfall of the gold standard, the ensuing sudden liquidation of the gold exchange standard, withdrawal of international credits, hot money flows and the general scramble for liquidity — all these and similar events on the national and international level are monetary factors. If these things could be avoided, catastrophes like the Great Depression would be impossible and other cycles would be mitigated.

If we define the concept «monetary factor» somewhat more comprehensively so as to include as its effects that part of existing instability which would disappear in the event that monetary policy succeeded (in addition to preventing the monetary disturbances mentioned above) in imparting a mildly anticyclical pattern to the supply of money and credit — monetary factors would be responsible for a still larger share in economic instability. In other words, the amplitude of the cycle would be sharply reduced if monetary factors in that comprehensive sense became inoperative (which would require, of course, acts of commission as well as of omission on the part of the monetary authorities).

This does, however, by no means imply that non-monetary factors are of no importance.

First of all, the monetary factors operate in an environment or impinge on a system which possesses certain non-monetary features that make the system respond to the monetary forces as it does. One could easily imagine an economic system in which the monetary factors would not produce large swings in output and employment but only fluctuations in prices, which would be a much less serious matter. If, for example, deflation did not breed pessimism and inflation did not produce exaggerated optimism (29), if in addition wages and prices were flexible and there were no large fixed monetary contracts, the effects of monetary instability on aggregate output and employment would be much smaller that they are in the real world.

The «monetary factor», the «psychological» factor and the «rigidity» factor are complementary in the strict sense of the word and reinforce each other. The resulting instability is their joint product and it is therefore quite legitimate to attribute to each of these factors a substantial share of the existing economic instability in such a way that the sum of their (alternative) shares greatly exceeds the total.

Second, I do not wish to discount completely — for short run purposes — fixity of capital coefficient as postulated by the acceleration principle — although even in the short run the capital-output ratio (and labor-output ratio) is not as rigid as many modern business cycle models assume (31). Nor would I ignore the multiplier. But the acceleration principle plus multiplier, unless combined with and reinforced by monetary factors, psychology and rigidities would hardly produce more than mild and inconsequential fluctuations. All these factors together bring it about that our economic system is subject to cumulative, self-reinforcing processes of expansion and contraction.

Third, there are autonomous changes in aggregate expenditure, especially the concentrations followed later by slumps of investments demand (including demand for consumer durables) caused by technological innovations and above all by wars and preparations for war. These «real factors» obviously do contribute their share to economic instability. But in my judgment it is mainly in their role as starters, intensifiers and interrupters of cumulative processes that they do their destabilizing work. That is to say, the «propagation problem» is more important than the «impulse problem». And in the propagation mechanism, the way in which the economy responds to outside impulses, the monetary factor plays a decisive role.

One important reason for this hypothetical evaluation is the historical experience that modern economies frequently take terrific impulses and shocks in their stride while on other occasions they seem to react strongly to modest shocks. Recent history offers numerous examples. Let me mention the transition from peace to war and the transition from war to peace, the latter entailing a tremendous sudden drop in government expenditures; another example is the reconstruction of war-time countries — such as Italy, Germany, Austria — and the subsequent levelling out of these economies into a more normal course of development. These shocks, which were absorbed with surprising ease, were certainly incomparably more severe than those that are supposed to have started the Great Depression. I conclude that the response mechanism is more important than the severity of the external shocks and in the response mechanism monetary factors play a most important role.

Gottfried Haberler