Sections 5 & 6, pp. 1095-1110 contain much important information buried in delicate discussions of multiform positions.

HEA part IV ch 2 # 8 pp 1080 ff. 2. ANALYTIC WORK

1080f Introducton that qualifies what follows.

1082 First by far the greatest of (the chief analytic performances of the period) was that of Walras. In the same sense it which it is true to say that he created economic statics -- the modern theory of economic equilibrium, it is also true to say that he created the modern theory of money. In fact his theory of of money and credit is simply part of this general theory of economic equilibrium. He therefore substantially fulfillled the great desideratum which has been so much stressed during the last twenty years, namely, the desideratum that the analysis of money should be built into the system of general theory instead of being developed independently and then plastered upon it. And, so far as monetary statics is concerned, all propositions developed about money and monetary processes are either contained in his system or may be derived from it by adducing additional assumptions. Thus, as has been shown by Lange [The rate of interest and the optimum propensity to consume, Economica, February 1938], the Keynesian analysis of the General Theory (not the Treatise of 1930) is but a special case of the genuinely general theory of Walras....

Another body of original work, related to that of Walras, may be onveniently mentioned here, namely, Irving Fisher's. [Read for historical qualifications].

1083 b) Marshall. Like Walras though less explicityly he sa the moetary problem as part of the general analysis of the economic process and as one of the doors to the theory of unemployment. More clearly than Walras, though less emphatically than Wicksell, he taught the importan of the distinction of the distinction between the 'real' and the 'monetary' rate of interest and of attending to the details of the mechanism by which chages in the amount of money act on the economic system.

.. As a matter of historical justice it should be emphasized that, in developing the English monetary theories of our own time, Hawtrey. Lavington, Keynes, Pigou, and Robertson developed Marshallian teaching -- though on their own lines.

1085 (c) Wicksell. The third great performance to be mentioned is that of Wicksell. Posthumously he acquired even greater reputation as a monetary theorist than either Marshall or Walras. This better fortune is due to the facts that his Swedish disciples never ceased to call themselves Wicksellians, even when they criticized and surpassed him, and that his message became accessible in German at a relatively early date and in a form that was not so forbidding as was that of Walras. But it took him decades to reach the Anglo-American sphere. References to disciples follow on the same page.

(d) The Austrians. They all started from Menger, who did not however strike out on a line for himself; his theory, though a masterly performance so far as it went, was simply a descendant from Davanzati's. It was Wieser who attempted a new departure... Wieser's spacious vision of the monetary phenomenon is not adequately rendered by calling him a sponsor of this or that approach. It comprised much more than that, in particular, the conception of a monetary theory of the economic process as a whole. But he was so deficient in technique... that nothing of this came out as it should have....

1086 3. FUNDAMENTALS

(a) Nature and Functions of Money. Questions on the nature and functions of money and hence on the question of definition were carried on throughout he period (1870-1914 and later).

1087 It seems worth while to advert to the following points.

First, the practice continued to prevail of developing the theory of money from its old four functions: medium of exchange, measure of value, sta dard of deferred payments, store of value... Walras... introduced the useful fashion of keeping distinct the numéraire -- a commodity whose unit is used to express prices and values b t whose own value remains unaffected by this role -- and monnaie -- the commodity that actually serves as medium of exchange and whose value consequently is affected because its monetary role absorbs part of its supply.

Second, discussions of hoarding and their relation to Keynes' Liquidity Preference.

1088 Third, the theory of money of th' period was not the monetary analysis in the sense of Becher and Quesnay (HEA II, ch 6, #1 (c) 283-5) or in the modern sense of the general theory of a monetary economy. But, with such exceptions as Walras, Wicksell), on the whole, monetary theory remained in one compartment and the 'theory of distribution and value' in another... the model of the economic process remained a barter model, the working of which inflations and deflations might disturb but which is logically complete and autonomous.

Hence, Wicksell's notion of Neutral Money and the discovery that the conditions of its existence could not be formulated.

1089 Fourth, so far and so long as money did remain in a separate compartment, its central -- and practically only -- problem was the exchange valu or purchasing power of money. In the analytic work of the period this stands out much more clearly than it did before... No doubt influenced by the progress of the index-number method, most authors, especially in the United States, did not hesitate to define the purchasing power of money as the reciprocal of the price level. The Austrians distrusted index-numbers and felt more theoretical qualms concerning the nature of the value of money.

.. From the first the Austrians entrtained a wish, not unnatural from their viewpoint, to apply their theory of marginal utility to the case of money -- which both the enemies of this theory and some of its foremost sponsors, Wicksell for instance, declared to be impossible... the individual must know what his money will buy before he can put any subjective value upon it....

1090 Most economists agreed -- or would have agreed if asked -- that marginal utility analysis does not apply to the exchange value of money. But the question whether the supply and demand apparatus applies to it was answered affirmatively by most. It is curious that many who, by adopting a special formula for money (equation of exchange, cash balance), testified to their belief that money cannot be so treated... In fact both friends and foes of the 'quantity theory' of money agreed in describing it as an pplication of the demand and supply apparatus to the case of money.

(b) Knapp's State Theory of Money. In Germany what may be described as a tempest in a teapot was raised by Knapp's State theory.

1091 4. THE VALUE OF MONEY: INDEX NUMBER APPROACH

1094 (b) .. Some statisticians and some economists of anti-theoretic bent seem to think that this piece of 'realistic' analysis is something to set against the flimsy structures of theory, something that has been created in the true scientific spirit, for the purpose of replacing mere speculation. It seemed important to correct this opinion. The subject of index-numbers affords a good example of the manner in which theoretical research and statisical research are really related and in particular how statistical methods may grow out of the theorist's work.

[(c) Haberler, Divisia, and Keynes.] With the exception of Wieser, most of the leading Austrians took a critical, not to say hostile, attitude toward the idea of measuring variations in the purchasing power of money by index numbers. They were inclined to refuse citizenship to the concept of price level and, in any case, to deny its measurability on principle. In view of the fact that so many economists placed and place an uncritical trust in index figures without troubling themselves about their meaning, this attitude provided a much needed antidote. And not only that. The criticsm, at first merely negative, eventually turned constructive in Professor von Haberler's book on the meaning of index numbers.

The core of his analysis is an interpretation of price index numbers that turns upon the following proposition: for a given individual of unchanging tastes, the price level has fallen (risen) between the points t_0 and t_1 if, his money income remaining the same, the individual is able to buy at t_1 a collection of goods which he prefers to the collection he bought at t_0 (is unable to buy at t_1....) This interpretation connects index numbers with welfare economics. But its chief importance is in the fact that it bases them on the theory of choice and thus makes them come to anchor at the very center of modern value theory.

For Prof Divisia's view see footnote 12 p. 1094f.

1095 Overall price levels, even if admissible, are for many purposes much less useful than sectional price levels.

The relative movements against each other of sectional price levels are of crucial importance in certain cyclical theores (Hayek) and for the monetary dynamics of Keynes Treatise, Bk 2.

HEA IV CH 8 # 7

1110 BANK CREDIT AND THE CREATION OF DEPOSITS

The situation [1870-1914] may be characterized by saying that the literature on banking and finance was as much a separate compartment within the literature on money and credit as the latter as within the literature on general economics.

References and comments on literature

Thus, academic [& near academic] analysis of credit and banking ... along on the stock of ideas inherited from the preceding period, refining, clarifying, developing no doubt but not adding much that was new. Subtandtially this meant the prevalance of the commercial theory of banking which made the commercial bill or, somewhat more generally, the financing of current commodity trade the theoretical cornerstone of bank credit. We shall, of course, trace this position/r to Tooke and Fullarton. But the currency school influence was stronge than appears on the surface. Toward the end of the period it asserted itself particularly in the precincts of the theory of cycles (inf #8)

1111 While economists enlarged their conceptions of the functions of the central banks, they were slow in recognizing to the full the implications of Monetary Management... Adherenceto the commercial theory, of course, was partly responsible for this. Because of this, control continued primarily to mean -- control by 'discount policy.' The economics profession was not sure whether it was in the power of central banks to regulate market rates or whether bank rate was merely declaratory.

Economists stressed the 'elasticity of the system that turns on financing commodity trade. But they had grown out, or were growing out, out of the opinion that if banks simply finance the needs of trade, then money and production will necessarily more in step and no distrubance will arise -- which is the really objectionable thesis. On the one hand,most of them realized, as Ricardo and Tooke had done before them, that there is no such thing as a quantitatively definitive need for loans or discounts and that the actual amount of borrowers demand is as much a question of the banks' propensity to lend as it is a question of the borrowers' demand for credit. On the other hand, they realized more and more that the practice of financing nothing but current trade -- discounting good commercial paper -- does not guarantee stability of prices or of business situations in general or, in depression, the liquidity of banks.

1112 And it was Wicksell's achievement // to introduce both facts into the general theory of money by means of his famous model of the Cumulative Process [infra 1118].

Finally, there is another point, quite independent of all this, that must be noted: the curious narrowness and lack of realism of that period's conception of the nature of bank credit....

.. In spite of certain technical differences, the credit supplied by deposit banking -- the bulk of commercial credit in capitalist society -- can therefore be construed of the pattern of a credit operation between two private individuals. As the depositors remain lenders, so bankers remain middlemen who collect liquid capital from innumerable small pools in order to make it available to trade. They add nothing to the existing mass of liquid means, though they make it do more work. (Prof. Cannan's illustration from claok-room attendants who loan out bags; they are not to be accused of creating what they loan]....

1114 Such were the views of 99 out of 100 economists.

1114 ... It is much more realistic to say that the banks 'create credit,' that is, that they create deposits in their act of lending, than to say that they lend the deposits that have been entrusted to them. And the reasons for insisting on this is that depositors should not be invested with the insignia of a role which they do not play. The theory to which economists clung so tenaciously makes them out to be savers when they do not intend to do so; it attributes to them an influence on the suppy of credit which they do not have. The theory of credit creation not only recognizes patent facts without obscuring them by artificial constructions; it also brings out the peculiar mechanism of saving and investment that is characteristic of full-fledgd capitalism. With less qualification than has to be added in most cases, this theory therefore constitutes definite advance in analysis.

Nevertheless, it proved extraordinarily difficult for economists to recognize that bank loans and bank investments do create deposits.

1115f [Illustrations from Keynes, Newcomb, Fisher, Macleod, Wicksell, in the US Davenport, Taylor, Phillips, in England D. H. Robertson and A. C. Pigou].

1116 The reasons why progress should have been so slow are not far to seek. First, the doctrine was unpopular and, in the eyes of some, almost tinged with immorality -- a fact that is not hard to understand when we remember that among the ancestors of the doctrine is John Law. Second, the doctrine ran up against set habits of thought, fostered as these were by the legal construction of deposits: the distinction between money and credit seemed so obvious and at the

1117 same time, for a number of issues, so important that // a theory that tended to obscure it was bound to be not only useless but wrong in point of fact -- indeed guilty of elementary error of confusing legal-tender money with the bookkeeping items that reflect contractual relations concerning legal-tender money. That the theory of credit creation does not necessarily do this seemed small comfort to those that feared its misuse.

1114n5 Shift in Keynes from Treatise on Money (1930) to General Theory (1936)

The deposit creating bank loan and its role in the financing of investment without any previous saving up of the sums lent have practically disappeared in the analytic schmea of the General Theory, where it is again the saving public that holds the scene. Orthodox Keynesianism has in fact reverted to the old view according to which the central facts about the money market are analytically rendered by means of the public's propensity to save coupled with its liquidity preference.

1117 We have seen that on the one hand, broadly speaking, the monetary analysis of that period centered on the problems of the Value of Money (or price level) but on the other hand that some leading economists were working their way toward monetary analysis of the economic process as a whole in which mere price-level problems fall into second place. This tendency has been illustrated by the implications of the cash balance and income approaches but it asserted itself also in many other ways. It is significant for instance that Marshall originally intended the volume that appeared as Money, Credit, and Commerce to carry the title Money, Credit, and Employment: and there are in fact many things in it that come within the range of recent Income and Employment Analysis. Much more significant was it that Wicksell... eventually made up his mind tp the effect that we need a concept of monetary demand for output as a whole [Footnote referring to Myrdal's Monetary Equilibrium]. This... anticipated, though in an incompletely articulate fashion, the consumption function of Keynes' General Theory.

But the most considerable advance in the direction of monetary analysis in the present-day sense occurred within the precincts of interest and business cycles. We have already noticed symptoms of a growing inclination of economists to recognize and to use a monetary concept of capital. Nothing came of this, nor did the few
1118 attempts that were made to interpret // to interpret interest as a purely monetary phenomenon meet with any success (cf. note 2). Throughout the period, the rate of interest remained for practically all economists, a rate of return -- however explained -- to physical capital and the money rate a mere derivative of the real rate. It had long been recognized, of course, that the two may diverge from one another: Ricardo's explanation how new money inserts itself into circulation implies recognition of this fact, and writers on banking have always been aware of it. But nobody attached much importance to it until Wicksell made it the center of his theory of the Wicksellian Cumulative Process: he pointed out that, if banks keep their loan rate beneath the real rate ... they will put a premium on expansion of production and especially of investment in durable plant and equipment: prices will eventually rise; and if banks refuse to raise their loan rate even then, prices will go on rising cumulatively without any assignable limit even though all other costs rise proportionally (note 3).

The analytic situation created by this argument may be described like this. In itself the Wicksellian emphasis upon the effects of possible divergences between money and real rates of interest does not constitute a compelling reason for abandoning the position that the fundamental fact about interest as a return to physical goods, a position from which Wicksell himself never departed. However, it does constitute a good and sufficient reason for treating the money rate as a distinct variable in its own right that depends, partlyat least, on factors other than those that govern the net return to physical capital (natural or real rate). The two are related, of course,. In equilibrium they are even equal. But they are no longer fundamentally the same thing."

/... [Note 5: ".. If we want to recognize explicitly/that the money rate has some measure of independence (from the real rate), we must introduce it as another variable and posit equality with the real rate as an additional equilibrium condition. This is what Wicksell did."]

1119 "And as soon as we recognize this, they will drift further and further apart and we shall drift further and further from the position that the net return in physical goods of one kind or another is the fundamental fact about the interest rate of the loan market -- the position that we have traced to Barbon [329ff.] and which Lord Keynes was to condemn on the ground that it involved 'confusion' between rate of interest and the marginal efficiency of (physical) capital. Other factors, such as the loan policy of banks, will then seem to us to be just as fundamental. and the road opens toward the purely monetary theories of interest that emerged later and of which the Keynesian was to attract more attention than any other."

Let us however keep in mind three things. (It is not suggested that those who worked out current theories of interest retraced the process from Barbon to Wicksell and thence to themselves; It is not suggested that current economists have reintroduced the Scholastic theories of pre-Barbonian times.) Third, by defining the new variable of our economic system, money interest, as a thing that is monetary in nature and not only in form, we do not eliminate from the problem of the loan rate the 'real' factors as completely as some economists seem to think: the rate of return to physical investment remains, at the very least, a factor in the demand for loans and therefore cannot vanish from any complete theory of the money rate. (Note 7: This fact is important precisely because it is so often denied and because Keynes's General Theory tended to obscure it, although it is not less essential for his monetary theory than it is for any other.)

1120 Wicksell's position in the development of modern monetary cycle theories is quite similar to his position in the development of modern monetary interest theories. He himself no more held a monetary cycle theory than he held a monetary interest theory. But he opened the road for the former as he did for the latter. In fact, the Cumulative Process itself need only be adjusted in order to yield a theory of the cycle...

(Notes on von Mises, von Hayek (Hawtrey's analysis)

1121 and on Hawtrey [in the US especially it was the outstanding rationalization of the uncritical belief in the unlimited efficacy of the open-market operations of the Federal Reserve System that prevail then.

and on gold...

1123 Juglar's Performance

It was only in the period under survey (1870-1914) that the 'cycle' definitively ousted the 'crisis' from its place in economists' minds and that the ground was cleared for the development of modern business-cycle analysis, though practically all workers in the field continued to use the old phrase -- an interesting case of terminological lag. This is why the decisive performance is considered here although it was published in 1862. It was the work of a man who was a physician by training, but must be ranked, as to talent and command of scientific method, among the greatest economists of all times, Clement Juglar. Yhis evaluation rests on three [Footnote 3: Clement Juglar (1819-1905) abandoned medicine for economics in 1848. He had no formal training in the latter subject even less than he knew about formal theory. His was the type of genius that walks only the way chalked out by himself and never follows any other. Many people do this in a subject like economics. But then they mostly produce freaks. The genius comes in where a man produces, entirely on his own, truth that will stand. Of his many publications it is only necessary to mention the principal one: Les Crises commerciales et leur retour periodique en France, en Angleterre et aux Etats Unis ('crowned' by the Academie des Sciences morales et Politiques in 1860, publ. as a book in 1862, 2nd edit. 1889, ET by W. Thom, from 3rd edit in 1916. There is a Notice of his life and work in the Comptes rendus of the Academie in 1909.]

1124 facts. To begin with , he was the first to use time series material (mainly prices, interest rates, and central bank balances) systematically and with the clear purpose in mind of analyzing a definite phenomenon. Since this is the fundamental method of modern business-cycle analysis, he can justly be called its ancestor. Second, having discovered the cycle of roughly ten years duration that was most obvious in his material -- it was he who discovered the continent; islands near it several writers had discovered before -- he proceeded to develop a morphology of it in terms of phases (upgrade, 'explosion,' liquidation). Though Tooke had done the same thing, the modern morphology of cycles dates from Juglar. And so does in the same sense 'periodicity.' This morphology of a 'periodic' process is what he meant when he proudly claimed to have discovered the law of 'crises' wihout any preconceived theory or hypothesis. Third he went on to try his hand at expalnation. The grand feature of this is the almost ideal way in which 'facts' and theory are made to intertwine. In themselves, most of his suggestions concerning the factors that bring about the downturn (loss of cash by banks, failure of new buying) do not amount to a great deal. But all-important was his diagnosis ~~was his disgnosis~~ of the nature of depression, which he expressed with epigrammatic force in the famous sentence: 'the only cause of depression is prosperity.' This means that depressions are nothing but adaptations of the economic system to the situations created by the preceding prosperities and that, in consequence, the basic problem of cycle analysis reduces to the question what is that causes prosperities -- to which however he failed to give any satisfactory answer.

Economists were at first slow to follow up Juglar's lead. Later on most of them... adopted his general approach -- so much so that that today Juglar's work reads like an old story very primitively told. At the end of the period stands a work, entirely conceived in his spirit, that ushered in the most important part of the cyclw analysis of our time: Wesley C. Mitchell's Business Cycles, 1913; rewritten 1927; with A. F. Burns, Measuring Business Cycles,

1125 (b) Common Ground and Warring Theories. That period then established a method, at least the fundamental principle of a method, on which, by the end of the period, a majority of business-cycle analysts agreed and which was to serve the bulk of the work of our own time. Agreement went further than this however. By the end of the period the lists of the features or symptoms that characterize cyclical phases -- which different economists did draw up or would have drawn up -- looked much alike. And not only that: by the end of the period most workers agreed -- or tacitly took for granted -- that the fundamental fact about cyclical fluctuations was the characteristic fluctuation in the production of plant and equipment.

Now how is this? We seem to be discovering a lot of common ground that should have assured much parallelism of effort and much agreement in results. Yet this is not at all what a survey of the literature reveals. On the contrary, we seem to behold nothing but disagreement and antagonistic effort -- disagreement and antagonism that went so far as to be discreditable to the science and even ludicrous. The contradiction is only apparent however. Agreement on a list of features, even if it had been complete (cf note 6), does not spell agreement as to their relations with one another, and it is the interpretation of these relations and not the list per se which individuates an analytic scheme or business-cycle theory. Even the agreement that it is the activity of the plant-and-equipment ('capital goods') industries which is the outstanding feature in cyclical fluctuations does not go far toward ensuring agreement in results since it leaves the question of interpretation wide open. And in order to avoid misunderstanding we must emphasize at once ~~that~~ that the outstanding feature of cyclical phases, whatever it is, need not contain within itself the cause that explains why cyclical fluctuations exist: this 'cause' may still lie somewhere else, for example, in the sphere of consumption. But in spite of all this, it remains both true and important that agreement went further than the troubled surface suggests and that most of the analysts of the business-cycle phenomenon who produced theories, which look different, really started from a common basis.

I. The fact that the 'relatively large amplitude of the movements in constructional, as compared with consumption, industries' is one of the most obvious 'general characteristics of industrial fluct-
1126 uations' can hardly fail to // obtrude itself upon anyone who has learned to look at a cycle as a whole, though it may escape attention as long as one looks merely at the depression phase. Nevertheless it took time for it to be be recognized consciously and with full awareness of its critical importance. Speaking very roughly, we may associate this achievement -- or a decisive share in this achievement -- with the work of Tugan-Baranowski. It is, however, only the emphasis upon the pivotal importance of that fact which constitutes the historical merit of the work. His own interpretation of it -- that is, his distinctive theory -- which runs in terms of alternating accumulation and release of liquid saving, is valuable only as an example of how short the way is from a promising starting point alley, even for an able and promising worker.

HEA 8/6 II. The outstanding work on the line under discussion is ARthur Spiethoff's. His analytic schema first lists a number of possible

1126 starters of a process of expansion of plant and equipment, which process then accounts without difficulty for all the other observed phenomena of booms, great care being taken to account for all the historical peculiarities of every historical instance.

1127 This emphasis // upon the expansion of plant and equipment is reflected in the choice for the role of fundamental index, of iron consumption (production minus imports plus exports). The problem that remains, namely why this expansion eventually runs into a general condition of production at a loss ('overproduction'), is then solved by means of several factors, such as shortage of working capital and temporary saturation of demand in particular directions. This schema, which leaves plenty of room for alternatives, is admirably suited for absorbing into their proper places and without exaggerating their importance, many other factors that are worked up into unique motors of the cyclical movement by other theories, such as 'psychological factors,' monetary factors, acceleration, undersaving.. Spiethoff's analysis, therefore, comes nearest to an oganic synthesis of relevant elements and to the full utilization of the coordinating power of that starting pont. And it has still another virtue: with the possible exception of Marx, Spiethoff was the first to recognize explicitly that cylcóes are the essential form of capitalist life. And he was one of the first to observe that there are long periods during which prosperity phases of cycles ('spans of prosperity') and other long periods during which depression phases are accentuated ('spans of depression'). He refused however to combine these drawn-out spells of predominant prosperity and depression into 'long cycles' and he reserved judgment as to their causation.

It would be extremely interesting to compare Spiethoff's work on cycles with the work of (D. H.) Robertson, which though independent of Spiethoff's, displays affinity in important aspects. There is

1128 no similarity in method. Spiethoff // in the spirit of Juglar from minute investigations of available statistics. Robertson worked first and last as a 'theorist,' taking only the broadest and most obvious facts as a base and concentrating on on forging tools of interpretation. Therefore their work is complementary rather than competitive. But their general visions of the cyclical process and its causation were closely similar.

III. A few examples will suffice to display the fact that most theories of cycles are nothing but different branches of that common trunk, 'plant and equipment.'

First, the reader will realize without difficulty that even purely monetary theories of cycles may be included among investment theories. For though they locate the causes of the cyclical movement in the monetary sphere, effects upon the plant-and-equipment industries are bound to play some role. If, in particular, explanation pivots on the money rate of interest, disturbance in the structure of physical capital must always be a factor in cyclical situations though, especially from a short-run point of view like, for example, Hawtrey's, it need not be made the decisive one. If we do not make it the decisive one, we get the non-monetary or semi-monetary theory of Hayek -- increased production of durable plant and equipment ('lenghtening of the period of production') through a fall of the money rate of interest below the marginal rate of profit.

Second, writers who agree to interpret business cycles primarily as investment cycles -- in the physical sense of the word investment -- may still differ as to the starter and such differences will individuate their theories. Thus, what may be termed a perpetuum mobiletheory contents itself with the fact that depression itself

1128 will in its course produce conditions favorable, first, to revival and, then, to the construction of new plant and equipment. To give another example, Mrs England, with a keener sense of the necessity for a more convincing cause, pointed to the activity of promoters or, more generally, ~~to the~~ into the horizon of entrepreneurs of new technological possibilities.

Third, whatever it is that gives the prosperity impulse, we may
1129 derive a // distinctive theory by emphasizing the indubitable fact that the plant and equipment, construction of which is undertaken in reaction to such an impulse, takes time to get into existence and working order -- time during which there is nothing to blunt the edge of that impulse. Consequently when later on the stream of additional products impinges upon consumers' goods markets, something like 'general overproduction,' that is, a price fall that turns expected profits into actual losses, may result. If we trust this explanation sufficiently, we can speak of a 'lag theory' of the cycle.

We get another version if we put the main emphasis, instead of on the fall of prices of consumers' goods, on the rise in the price of cost items. The former version may be exemplified by the works
Bouniatian of Bouniation and Aftalion, the latter by that of Lescure, though there is much in all three of them to relieve the pressure on the factor primarily stressed. Incidentally we may infer from this that he who says that business cycles are primarily cycles in prices may mean exactly the same thing as he who says they are primarily cycles in investment.

Fourth, there was again, as there had been in the preceding period, a crop of those theories which, in one way or another, impute responsibility to the inadequacy of money incomes in general -- more precisely, their failure to expand pari passu with the production, actual or potential, on consumers' goods -- or to people's saving habits, or finally to inadequacy of the incomes of some classes and the saving habits of others. I have had occasion already to comment on the indestructible vitality they owe to their popular appeal -- particularly strong in prolonged periods of predominant depression -- and not to any great improvement in their analytic foundations that they owed their survival. Leading scientific opinion, however, continued to be unfavorable to them and they continued, in Lord Keynes' felicitous phrase, to live in a scientific underworld. So much was this the case that leading economists did not even bother to make the concessions that were obviously strong, indicated. For though the argument against oversaving // may be
1130 so long as they aver that saving is an ultimate and independent 'cause' of disturbance, it should never be denied, on the one hand, that there are plenty of hitches in the saving-investment mechanism and, on the other hand, that saving, in a depression that has already set in for reasons other than saving, may make things worse on balance than they otherwise would be, expecially if saving takes the form of hoarding as it is likely to do in a depression. They did not even emphasize the role in the cycle of that saving which is being used for the repayment of bank loans. Thus a considerable tract of open country was left unguarded in which, to the backward gaze of the economist of today, there seems to stand in something that to many looks very like a halo of glory, the figure of J. A. Hobson. Actually he was not a solitary figure. Nor did he come very near to having anticipated the doctrines of present-day Keynesianism. But we shall confine ourselves to him.

1130 In most cases, there is no sharp dividing line between underconsumption theories and others. Some, though not all of them, might just as well be couched in terms of overproduction or overinvestment, monetary or real -- whereupon it becomes easier to see that they are but another branch of the plant-and-equipment tree. This is particularly clear in the case of the type of argument (oversaving) that was espoused by Hobson. Today most writers who see saving in the role of villain of the piece aver that the mischief arises from savers' not spending at all, either on current consumption or on 'investment goods': the problem then is to show why people, having saved, refuse to invest, thereby creating unemployment and pools of idle money. But though Hobson notices this aspect of the matter he based, not quite logically, his explanation of cyclical fluctuations and of the incident unemployment upon an entirely different argument. With him saving produces alternating prosperities and depressions because savers do invest promptly and thereby increase the productive powers of the economic engine beyond the possibility of sale at cost-covering prices. This line of reasoning may be labeled Overproduction-through-Saving and certainly is not Keynesian. But Hobson, like Tugan-Baranowsky before him, went on to point out that most saving is done by the very rich and he used this fact to arrive at the proposition that the ultimate cause of cyclical disturbance and the incident unemployment is the
1131 inequality of incomes. Therefore, we shall understand why economists who are interested in nothing but politically relevant results will hail Hobson as a forerunner of Keynes.

Fifth, it is only for the sake of convenience that I put Marx at the end of our list of examples. In justice, he ought to have been put first because more than any other economist he identified cycles with the process of production and operation of additional plant and equipment.

Both followers and enemies have experienced difficulty in attributing to Marx any clear-cut theory of cycles. The obvious reason for this difficulty is that Marx did not live to systematize his ideas on the subject: his theory remained the great 'unwritten chapter' of his work. But there is another and more fundamental reason. His topic was capitalist evolution. Everything he ever wrote, even his scheme of a stationary society, was written to elucidate this topic. Capitalist evolution was to end in the breakdown of the system. He early adopted the idea -- it is already in the Communist Manifesto -- that the current crises were previews of this breakdown (the economic complement of the Revolution). Therefore all the elements of capitalist reality were, directly or indirectly, relevant to his vision of the cyclical phenomenon. The 'unwritten chapter' would have to sum up the whole of his analysis of capitalism. And the whole of the analysis centered in turn in (1) the production of 'real capital' and (2) the factors that change its composition (relative increase of constant compared with variable capital). These are the unifying conceptions to which must be referred what otherise may appear to be ~~otherwise~~ disjointed and even contradictory hints. There are, of course, many of these, such as: capitalists' ineluctable craving for accumulation (regardless of return) that is to motivate bursts of investment activity -- the weakest point, though buttressed by various suggestions about more substantial factors; the ever-present impulse that produces manias and crashes (vividly but

1131 superficially described by // Engels; the tendency of the rate of profit to drop (whether or not sufficiently motivated); overproduction and anarchy (uncertaint) of capitalist decisions; recurring periods of reinvestment (renewal of the physical apparatus of production) with periods of reduced activity to follow. There were others, among them a clear pointer to underconsumption by the laboring masses as the 'last cause of all real crises' (Capital vol. III, p. 568) and toward the consequent inability of capitalists to 'realize' the surplus value that 'exists' in the commodities that have been produced. Conflicting evidence makes it impossible however to impute to Marx an underconsumption theory of cycles though it remains possible to attribute to underconsumption a role in conditoning an ultimate state of stagnation.

But none of these hints, taken by itself, not their sum total amounts to a theory of cycles. So far as Marx is concerned, the historian of analysis, after having noticed the basic conception and also perhaps the particularly unsatisfactory handling of money and credit, must leave it at that. All the same there are a number of Marxist cycle theories. But they should be attributed not to Marx but to their authors -- Marxists who, either selecting hints that appealed to them more than others or trying to develop, from a Marxist basis, ideas of their own, provided substitutes for the 'unwritten chapter' rather reconstruction of it -- fully believing no doubt that they were interpreting Marx and always keeping in mind the cherished relation between the crises of experience and the ultimate catastrophe of capitalism. It is not possible to survey them in a sketch like this.

(c) Other Approaches. Though it is impossible to survey all the other ideas that emerged during the period about the nature and causation of economic fluctuations, it is both possible and necessary to point out that most of them, besides being suggested by untutored observation, were bound to appeal to economists who had developed economic statics as the centerpiece of their science. As we have seen above, they naturally exaggerated the importance of their central achievement. They saw more in it than we do, that is. more than a logical scheme that is useful for clearing up certain equilibrium relations but is not in itself directly applicable to the given processes of real life. They did not realize how many and how important the phenomena are that escape the logical schema and loved to believe that they had got hold of all that was essential and 'normal.' Now from the standpoint
1133 of this type of // analysis, as it is natural to locate the causes of observed distrbances either outside of the economic system or in the fact that the economic engine , like any engine, never works with precision. And this attitude toward observed fluctuations was the common root, or common characteristic, of another group of theories that also seem at first sight to have nothing to do with one another. We shall notice three examples.

First, the most exogenous of all factors that influence economic life is variation of harvest in so far as due to weather, a factor pressed into service for the purpose of explaining business fluctuations by W. S. Jevons, by H. S. Jevons (his son), and H. L. Moore.

Second, the fact that the economic engine is likely to stall may be exploited for the purpose of business-cycle analysis in various ways. The most direct one is to attribute responsibility to uncertainty in general, which will result in erroneous decisions.

1133 But since this uncertainty is, in many respects, due to the fund-
the/ amental properties of/private enterprise economy, we may also
accuse the latter's institutions. And since individual errors
1134 cannot convincingly be held to produce big disturbances, unless
they are overwhelmingly one way, we may put our trust in waves
of optimism and pessimism, a version that was quite common and
later onwas to appeal to such authorities as Pigou and Harrod.
There are many other variations of this theme, none of which
is entirely void of a modest element of truth and all of which
are unequal to the burden put upon them.

Third, so long as we do not see much ground for believing that the economic system produces general fluctuations by virtue of its own logic, we may easily conclude that these fluctuations arise simply whenever something of sufficient importance goes wrong, no matter for what reason. Roscher had already delivered himself to this effect, and no lesser man than Bohm-Bawerk once expressed the opinion that there was no general explanation of either cycles or crises: they belong to a last chapter of an economic treatise where all their possible causes should be listed. There is more in this opinion -- I am inclined to believe that Marshall would have agreed with it -- than appears at first sight, though Juglar's achievement suffices to show up its adequacy. It takes account of though it overstresses the fact which is so often neglected by ardent theorists, namely, that every cycle is a historical individual to some extent and that unique combinations of circumstances must enter largely into every analysis of a particular case. Moreover, it bars effectively all those single-factor explanations that rest on nothing but their author's pet aversions -- such as saving or exploitation. Finally it invites detailed study of individual mechanisms, which carries us a long way, but not the whole way. The bulk of what has been done on this line belongs however to the postwar period: the necessary analytic techniques were slow to develop. [On these see below, Part V, ch. 4, Dynamics and Business Cycle Research.]

All this -- together with what has been said above in section 8 -- seems to establish our thesis: the essentials of both the methods and the explanatory principles that serve in today's business-cycle analysis, barring refinements of // technique, date from
1135 before 1914 -- an instance of continuity in development or of filiation of ideas that is all the more interesting because conscious effort was all the other way. Fairly satisfactory synthesis that would have left no major fact unaccounted for and would have constituted an excellent basis for further research was objectively possible by then. Why was it not attempted? The answer seems to be that objective possibility is one thing and its realization is another thing: no more than any other history can the history of research afford to neglect the personal element. Entangled in controversy that was often petty, enamoured of their own ideas and particular emphasis, economists plodded along successfully enough. But nobody arose to what would indeed have been a most difficult feat of leadership.

1135 In view of the entirely founded criticism that many of us are in the habit of directing against the work of that time, it should be added that economists did not fail to offer explanations of unemployment that were certainly not obviously inadequate. By going over once more the contributions that have been mentioned and scrutinizing them for their implications concerning unemployment, the reader can easily satisfy himself of this. Sectional and general, technological and 'monetary,' temporary and 'permanent,' types of unemployment were all in the picture that would have resulted from an effort of balanced synthesis -- even our own mistakes were there. The indictment that the economists of the time disposed of unemployment as merely frictional is true only if we adopt so wide a definition of friction as to render the indictment tautological.

But another indictment stands against the vast majority of the economists of that period if it be indeed proper, considering the analytic situation in which they worked, to call it an indictment: with few exceptions, of which Marx was the most influential one, they treated cycles as a phenomenon that is superposed upon the normal course of capitalist life and mostly as a pathological one; it never occurred to the majority to look to business cycles for material with which to b uild the fundamental feature of capitalist reality.

[33 This of course is what J. A. S. himself attempted in his monumental Business Cycles: a Theoretical, Historical, and Statistical Analysis of the Capitalist Process (2 vols., 1939) and much earlier in his Theorie der wirtschaftlichen Entwicklung (1912; 2nd rev. ed. 1926; ET, Theory of Economic Development, 1934).]

Schumpeter, Hist Econ Anal, Part V, ch. 4, #1 Dynamics + Business Cycle Research

1161 Dynamizing Aggregative Theory: Macrodynamics.

This (equation in text) is the gist of the Hansen-Samuelson equation: see "Interactions between the Multiplier Analysis and the Principle of Acceleration," Review of Economic Statistics May 1939, Readings in Business Cycle Theory, chairman G. v. Haberler, 1944. Cf. Samualson, 9th ed., pp. 260 ff.

1163 #2. The Statistical Complement: Econometrics.

This involves the fundamental principle that construction of the theoretical set-up should precede the statistical work: the relations themselves are not suggested by statistical

n. lo observations; they are postulates and not results. Statistical figures are to explain the numerical the numerical values of some variables by given numerical values of others by the method of multiple correlation -- a process which eliminates those explantory variables whose partial regression coefficients indicate the insignificane of their influence.

Frisch, Tinbergen, Haavelmo

n. 10: (postulates and not results) This is the fundamental difference betweeen the methods of Tinbergen and those of W. C. M9tchell, whose methods will be touched upon below.

1166 ...a brief comment on the little controversy about methodology mentioned above. Mitchell might have done something toward preventing it, had he distinguished more clearly between theory in the sense of explanatory hypothesis and theory in the sense of analytic apparatus. Most of us would have agreed with him if felt that the formulation of explanatory hypotheses should wait upon ~~wait upon~~ a fuller command of the facts and that the explanatory hypotheses so far offered, old and new, lacked proper substantiation and might ~~be unable and might~~ be unable to stand up in the light of the facts he was going to assemble.

1167

Schumpeter HEA 280 n. 6 Cf my short-term acceleration.

.. modern votaries of Monetary Analysis, and in particular its leading exponent Lord Keynes, frequently introduce a most sigificant restriction: they assume the organization and technique of production and the capital equipment as given (in the short run), thus reducing the problem before them to the question what determines in the short run the degree of utilization of a given industrial apparatus and, in further simplification, they identify this greater or smaller degree of utilization with greater or smaller employment of labor so that increase or decrease of industrial investment simply means a greater or smaller wage bill... But the reader should observe (a) that the restrictive assumption in question excludes the very essence of capitalist reality, all the phenomena and problems of which -- including short-run phenomena and problems -- hinge upon the incessant creation of new and novel capital equipment, and (b) that, because of this, a model framed upon this restrictive assumption has next to no application to questions of practical diagnosis, prognosis, and, above all, economic policy unless reinforced by extraneous considerations.

HEA p 473 note 3 Parallel between Keynes and Ricardo
HEA 1171 Keynes' vision in successive works
1919 Economic Consequences of the Peace
1923 Monetary Reform
1930 Treatise on Money
The treatise met with respectful but damaging criticism and did not express adequately Keynes' Vision. "Thereupon with admirable resoluteness, he determined to throw away the impeding // 1172/pieces of apparatus, and bent to the task of framing an analytic system that would express his fundamental idea and nothing else.

XIII Schumpeter, Hist Econ Anal, Part V ch 5 #1

1171 #1. Comments on the Wider Aspects of Keynes Work

First, Keynes' work presents an excellent example for our thesis that, in principle, vision of facts and meanings precedes analytic work, which, setting in to implement the vision, then goes hand in hand with it in an unending relation of give and take.

... and the Treatise on Money, Keynes most ambitious purely scholarly endeavor. This Treatise ... met respectful but damaging criticism and, above all, failed to express Keynes' vision adequately. Thereupon with admirable resoluteness, he decised to throw
1172 away the impeding//1172// p eces if apparatus, and bent to the task of framing an [illegible] system that would express his fundamental idea and nothing el[illegible]e.

Second, Keynes' acknowledgements of indebted ness....

Third, Keynes must be credited or debited, as the case may be, with the fath[illegible]erhood of modern stagnationism (in the
^e sense apparently of ^reversal to an ongoing stationary state)

1173 N. 3 ... evidently it comes to the same thing, in a p[illegible]rofit economy, whether the objective opportunities for gainful enterprise decrease or the profits after having been made are taxed away...

A para llel is drawn between Keynes and Hansen's arguments and those of Ricardo and J. S. Mill. Them main difference is that they predicted difficulties in the process of settling down to a stationary state that did not occur to Ricardo.

JAS's editor adds a reference to Capitaism Socialism and Democracy (1942) where J A S put forward the point of view that 'capitalist evolution tends to peter out because the modern state may crush or paralyze its motive force.

1174 #2. The Analytic Apparatus of the General Theory

The analytic apparatus of^the general theory is, first, essentially static. We shall explain presently the apparent paradox that its place in the history of analysis is nevertheless bound up with the impulse it gave to macrodynamics. Nor do I mean to deny that large parts of the book -- some would say, its most valuable parts -- are devoted to dynamic considerations. But these were added to a skeleton

that was severely static, so much so as to neglect, on principle, all sequences and periods.

Second, this static theory is not the statics of long-term normals but the theory of short-run equilibria.

Third, the most important point in this connection is that, //1175// of all the aspects of the investment process,//1175// it is the onlythe expenditure effect of new investment which enters the model (not the book); as Keynes himself rightly emphasized, physical capital (equipment) is assumed to remain constant throughout, but in kind and quantity. This limits the theory to an analysis of the factors that determine the higher and lower degree of utilization of existing industrial apparatus. Those who look for the essence of capitalism in the phenomena that attend the incessant recreation of this apparatus and the incessant revolution that goes on within it must therefore be excusd if they hold that Keynes's theory abstracts from the essence of the capitalist process.

Fourth, though aggregative, Keynesian analysis -- no doubt for the sake of simplicity -- presupposes 'free', if not actually 'pure' competition in all commodity and factor markets.

Fifth, every body is supposed to react to a particular kind of 'real' values, namely, to prices expressed in wage-units or prices divided by an average money wage per unit of labor, which is determined by bargains between employers and employees -- a well-nigh desparate measure of simplification that makes results incomparable as betweeen two different points of time unless wage rates are the same in both. But there is an important exception to this postulate that people calculate in terms of real values in this: workment do so only in so far as they save or invest but not in their bargains about their labor; when they negotiate wage contracts they consider exclusively money wage rates.

Within this framework set by these five points, Keynesian analysis -- the analysis of current national income -- works five endogenous variables, that is, variables that the system is to determine: national income itself, employment, consumption, investment, and the rate of interest, and one exogenous variable that is given to the system by the authorities, quantity of money. Employment may be allowed to drop out on

Schumpeter, Hist Econ Anal, Part V, ch 5, #2 con'd.

1176 the strength of the //1176// hypothesis, perhaps permissible in the very short run, that it is uniquely determinable by national income. The latter's current value is by definition identically equal to corrent consumption and current investment, all three quantities being expressed x by wage units. And with all the givens implied, currentincome may be said to be 'determined' by three functions or schedules that Keynes dignified with the xxxxxxxxxxx title of psychological laws, the consumption function, the investment function, and the liquidity preference function, the three great simplifiers, which are to implmement Keynes's vision of the economic process, in particular his intention to prove the existence of unemployment equilibria and, to put it with perhaps inadmissible emphasis, his convction that saving (or alternatively the rate of interest) holds the role of villain in the piece that impoverishes nations.

1177-9 Historical comparisons and disputed issues.
'80-'84 Ditto

XIV

Joan Robinson, Economic Heresies, New York: Basic Books, 1971, 73.

15: "The notion of the supply price of capital being the 'reward of waiting' was invented by Marshall, but he never really reconciled himself to the confines of the stationary state. In his vision of contemporary capitalism, as opposed to his formal analysis, 'progress' is taking place. He can best be understood if we set his argument in a kind of near-enough golden age with steady overall accumulation going on and a more or less constant overall rate of profit. Profits in particular industries go up and down around a central 'normal' ~~xxxxxxxxxxxxxx~~ level, and the total stock of capital is continuously growing. This model... has something in common with the classics, since it depicts growth; but it is radically different in its theory of profits. For the classics, the real-wage rate is given in terms of the commodities that the workers consume; the rate of profit then emerges as a residual. For Marshall, the rate of profit is given and the real-wage rate in terms of all commodities emerges as a residual.

19: "An out-of-equilibrium situation may be a seller's or a buyer's market. In a seller's market the level of demand is such that it would be possible to sell more than the capacity rate of output at prices that cover average total costs (including all overheads and an allowance for amortization) and yield a net profit. In a buyer's market it is impossible to sell capacity output at a remunerative price. The distinction is not precise because capacity output is not a clear-cit conception."

24: "Keynes was concerned above all to show that there was no 'natural' tendency toward equilibrium with full employment; therefore government policy is necessary to make the private-enterprise system work in a tolerable manner. He was of course mainly concerned with the question of remedies for unemployment; he merely glanced at the problem of inflation in a seller's market [he analysed it later] and his long-period analysis is very sketchy. It was left to Harrod to transpose the General Theory into long-period terms, showing that an uncontrolled capitalist economy cannot be expected either to maintain stability or to produce growth at a satisfactory rate."

30: "When the rate of interest is too low, speculation sets in, rash investments are made, prices are driven up. Too low a rate

30 of interest thus causes a temporary and unhealthy rise in prospective profits (Marshall). It was left to Keynes to point out that too high a rate of interest causes depression and low profits.

30: Keynes cleared up the verbal confusion of the neoclassics by drawing a sharp distinction between the rate of profit and the rate of interest, that is, between the return on real investment accruing to entrepreneurs and the cost of borrowing which influences the return onsecondhand placements received by rentiers. But he did not attempt to supply a theory of the rate of profit in the long run. His argument was concerned purely with the short-period situation. The expected rate of profit, which he called the marginal efficiency of capital, is an estimate of future returns to be obtained on investments in productive capacity; it is necessarily uncertain and it is influenced by subjective psychology --- the state of the animal spirits of the investors.

32: "The neo-neoclassicals, who tried to reconstruct traditional orthodoxy after the Keynesian revolution, slipped back into the habit of identifying the rate of profit with the rate of interest and asserted the doctrine that the rate of return measures the marginal productivity of capital from the point of view of society as a whole, without attempting to explain what it means."

80: "The dominant influence on the swings of effective demand is swings in the expectation of profits."

81: ".. in the orthodox system that he (Keynes) had to attack, the rate of interest, confused with the rate of return on investment, was the regulating mechanism which caused savings to be invested and secured equilibrium with full employment. He had //82// to make every possible concession to this point of view to get a hearing. It would have been much simpler to start by assuming a constant rate of interest. But then his whole position would have been dismissed as a misunderstanding of the orthodox position. He was obliged to accept the presumption of his critics in order to explode them from within.

(1973)

Samuelson, Economics 749 n 20, uses a version of the "golden age."