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MR. KEYNES ON UNDEREMPLOYMENT EQUILIBRIUM[1]

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MR. KEYNES regards his new book[2] as the fulfilment of the imperfect, though essentially correct, views of "Mandeville, Malthus, Gesell and Hobson"—majors in the "brave army of heretics . . . . who, following their intuitions have preferred to see the truth obscurely and imperfectly rather than to maintain error reached, indeed, with clearness and consistency and by easy logic, but on hypotheses inappropriate to the facts."[3]

Mr. Keynes announces in the first chapter of his book that it is his purpose to contrast his arguments and conclusions with those of the *classical* economists, by which he means Ricardo, Mill, Marshall, Edgeworth, and Pigou. He confesses in his Preface that the orthodox economist will probably fluctuate between the belief that his new book is quite wrong and the belief that it contains nothing new. For himself, however, the author feels that the composition of this book has been a long struggle of escape

[1] I wish to express appreciation of many stimulating discussions with Dr. Tord Palander of the University of Stockholm, and with Dr. Eugen Altschul and Mr. B. H. Higgins of the University of Minnesota.

[2] *The General Theory of Employment, Interest and Money.* New York: Harcourt, Brace & Co., 1936. Pp. xii+403. $2.00.

[3] Keynes's new work is especially inspired by Malthus. In connection with his current appreciation of the work of John A. Hobson (only slightly in evidence in the *Treatise* of six years ago) it is not without interest to turn back to a review of Hobson's *Gold, Prices and Wages* (*Economic Journal*, September, 1913, pp. 393–98) written twenty-three years ago. In this review Mr. Keynes says: "One comes to a new book by Mr. Hobson with mixed feelings, in hope of stimulating ideas and of some fruitful criticisms of orthodoxy from an independent and individual standpoint, but expectant also of much sophistry, misunderstanding, and perverse thought. . . . . The book is . . . . made much worse than a really stupid book could be, by exactly those characteristics of cleverness and intermittent reasonableness which have borne good fruit in the past." This characterization by Mr. Keynes himself is not altogether inapplicable, some will perhaps say, to his own book.

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from habitual modes of thought and expression, and "so must the reading of it be for most readers if the author's assault upon them is to be successful." The difficulty, he says, lies not in the new ideas, which even though laboriously expressed are in reality extremely simple, but rather in the fact that the old ideas, on which we have all been brought up, ramify into every corner of our minds and keep us chained in fetters.

The reader who is familiar with the earlier work published six years ago, the *Treatise on Money*, is likely at first to be somewhat bewildered upon taking up this new book. Yet Mr. Keynes explains that what to others may appear as a confusing change of view seems to him to be a perfectly natural evolution in the line of thought which he has been pursuing for several years. With this interpretation the present reviewer finds himself quite sympathetic. For, while Mr. Keynes has now donned an entirely new suit of clothes, it is not difficult to see that it is, after all, the same man who wears them.

The imposing edifice erected in a *Treatise on Money* is, indeed, wholly abandoned. It had been shown that there was a serious error in his first fundamental equation.[4] The correctness of this criticism Keynes at once admitted,[5] and announced that in future editions of his book he would redefine the units in which the physical quantities were measured so as to correct this error. It was then pointed out that, were this done, his second fundamental equation would thereby equally be rendered of no practical significance.[6] Still more disconcerting was the conclusive demonstration by Hawtrey and Robertson that the disequilibrium between investment and saving as Keynes defined them was incapable of revealing the causal factors at work. It was shown that the inequality of saving and investment, as defined, merely reflected and registered the course of events; that this divergence could not be regarded as the "cause of a windfall loss or gain, for it *is* the

[4] Alvin H. Hansen, "A Fundamental Error in Keynes' *Treatise on Money*," *American Economic Review*, September, 1932.

[5] *American Economic Review*, December, 1932.

[6] Alvin H. Hansen and Herbert Tout, "Investment and Saving in the Business Cycle," *Econometrica*, April, 1933.

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windfall loss or gain."[7] These and other criticisms left his theoretical structure without a foundation and compelled either an abandonment or a radical reconstruction.

The critics may well, however, be wary of assuming too much credit for the author's abandonment of the edifice so elaborately constructed only six years ago. For Mr. Keynes is one of those rare and delightful spirits who finds it quite impossible to live happily for long in contemplation of old ideas, even though those ideas are his own. He must forever be exploring new frontiers and evolving new insights and new solutions. It is this characteristic which makes Mr. Keynes one of those phenomena in our current age which helps to make life worth living. *The General Theory of Employment, Interest and Money* is no less stimulating than was the *Treatise on Money.*

The new book is not a treatise; it is a debate to which the public is invited, and the ticket is five shillings in England and two dollars in the United States. The publication of a book with so difficult and complicated an analysis at a best-seller price is itself indicative of the power and prestige of Mr. Keynes as a social prophet in the current distracted world. The shafts are directed, as the author himself announces, at the classical school from Ricardo to Pigou, but in the midst of this major contest Mr. Keynes finds ample strength for many a dart at the neo-Viennese and London school.

And what is the debate about? Very briefly it may be stated as follows: Ricardo had built up quite logically and consistently a theory of prices and distribution based on the assumption of an equilibrium position at which the factors of production were fully employed. It is Keynes's purpose, however, to develop—what he thinks the classicals had neglected—the general theory of employment. He criticizes the classical school, not for their analysis of the manner in which the factors of production are combined or of how the value of the final product is distributed between them, but because they neglected to consider the determinants of the volume of employment and output as a whole. They assumed

[7] R. G. Hawtrey, *The Art of Central Banking* (1932), p. 349; and D. H. Robertson, *Economic Journal*, September, 1931.

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that there was but one equilibrium position—that of full employment. Keynes argues that this position is but a limiting point of a whole range of possible positions of equilibrium. It is the essential function, indeed, of his new book to show that in the actual conditions of the current economic order equilibrium is reached at a point far below full employment, and to elucidate the factors which determine at what level any one equilibrium position is reached. What is criticized, therefore, is not the theory of prices and distribution of the classical school, but the assumption that there is only one equilibrium point, and in particular the disastrous and misleading attempt to apply the characteristics of the special case of equilibrium at full employment to the quite different facts of experience in the economic society in which we actually live.

What is correct policy in the case of equilibrium at full employment may turn out to be quite a wrong policy in an equilibrium position at underemployment. At full-employment equilibrium one is concerned only with the proper allocation of the factors in the production of consumption goods and of investment goods. One is not concerned with the problem of full employment of these factors, since that is assumed. Under these conditions consumption and investment stand in a competitive relation to each other. If investment is increased, consumption must perforce be reduced, and vice versa. In such a society the question of how much to save and how much to consume involves exclusively the problem of future satisfaction of wants as against present satisfaction of wants. Increased investment may, under these circumstances, be justified as a means of increasing future production. Neither investment nor consumption has any relation to the problem of employment as such, since full employment is assumed regardless of the ratio of consumption to income. But if the society is at equilibrium at a point of underemployment the matter is quite different. Under these circumstances consumption and investment stand not in a competitive relation but in a complementary relation to each other. With underemployment, an increase of investment, far from requiring a restriction of consumption, will, because of the resulting increase in employment and

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income, tend to increase consumption. Likewise an increase in consumption (i.e., an increase in the percentage of the income consumed) will raise the prospective profitableness of investment. Thus both consumption and investment are simultaneously increased and thereby also, employment, output, and income. While a puritanical policy of thrift and saving may be quite appropriate in a society in equilibrium at full employment, prodigality may be the appropriate social virtue in a society in equilibrium at underemployment.

It is evident that the great problem for a society in equilibrium at underemployment is to bring under social control the determinants of equilibrium. Only in this manner can the position of equilibrium at full employment be achieved. What now are these determinants? They are: (1) the propensity to consume, (2) the schedule of marginal efficiency of capital,[8] and (3) the complex of rates of interest on loans. These are the determinants of the volume of consumption and of investment, which in turn fix the volume of output, income, and employment for society as a whole.

The ultimate causal forces are therefore found outside of the price system, in the mores, customs, habits, and behavior patterns of the people. The fundamental psychological factors are the psychological propensity to consume, the psychological expectation of future yield from capital assets, and the psychological attitude to liquidity. Psychological propensities, mores, and behavior patterns are thus the root forces which lie back of and control consumption and investment and thereby determine what the point of equilibrium shall be.

In this connection let it be noted that when modern capitalism was in process of developing, and when it was in full bloom, it did not rely solely on the automatic functioning of the price system to supply an adequate volume of saving. It preached the doctrine of thrift and sought to establish a propensity to save.

[8] Keynes alleges that current business-cycle theory fails to see that the marginal efficiency of capital depends on the prospective yield of capital (pp. 141, 145–46). In this he is, however, definitely in error. See, for example, chaps. iv and vi (esp. pp. 82–86 and 134–35) in my *Business-Cycle Theory* (1927), where a survey is given of writers who analyze the cycle phenomenon in terms of "fluctuations of the marginal efficiency of capital relatively to the rate of interest."

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On the classical assumption of full employment one need have no concern about the propensity to consume, for what was not consumed was saved. And saving merely meant a diversion of production toward the creation of investment goods. The rate of interest was the regulator which controlled the ratio of consumption to income. If the rate of interest fell, less was saved and a larger percentage of the income was consumed. If the rate of interest rose, more was saved and less was consumed. Thus in the earlier view the supply curve for savings assumed the familiar, normal shape. Later to be sure, this definite inverse correlation between the rate of interest and saving was subjected to criticism. In neo-classical thinking doubt had been raised with respect to the precise relationship between the rate of interest and saving. Within certain limits, indeed, a lower rate of interest might induce a larger volume of saving. All this is familiar ground, and needs no elaboration here. It was held, nevertheless, that while a fall in the rate of interest up to a certain point might indeed stimulate saving, below a certain minimum level any further decline would reduce the volume of saving and stimulate consumption. Cassel in his *Nature and Necessity of Interest* had argued that, because of the shortness of human life, capital depletion would set in, once interest fell below a certain point. Below this minimum rate consumption would be stimulated at the expense of saving.

Thus, while neo-classical thought refused to accept the doctrine of an invariant relation between interest and saving, it did not go so far as to break completely the dependence of saving upon the rate of interest offered in the market. While under modern high standards of living it had come to be believed that the growth of population had little relation to the rate of wages, it was only within certain limits that the same position was taken with respect to the supply of capital as a variable independent of price. The view of Hobson—that saving had no relation to the interest rate, that it was determined wholly by the mores, customs, and behavior patterns of the population, by the propensity to consume and its inverse, the propensity to save—remained the unorthodox view.

With Keynes (as with Cassel, but for quite different reasons)

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there is a minimum rate of interest below which—unless, indeed, determined action is taken by society—the rate of interest cannot fall. He suggests that this minimum rate is 2 or 2½ per cent. But with Keynes, despite this minimum rate, society (because of a fixed propensity to consume only a limited proportion of its income) continues to pour out a steady flow of savings. Thus the marginal efficiency of capital may well fall to a point below the minimum rate of interest. Here, then, is to be found the mechanism which drives the economic system to an equilibrium level below the point of full employment. According to Keynes, at this minimum rate of interest saving is not deflected toward consumption, as Cassel had it; instead, it is at this point that hoarding begins. If saving continues willy-nilly by reason of a fixed psychological propensity without regard to price factors, and if the marginal efficiency of capital in a wealthy community falls below the minimum interest rate, then of necessity a part of the planned individual savings cannot find outlet in realized investment.

At this point it becomes necessary to inject a brief consideration of terminological difficulties. In the new book Keynes formally abandons his former highly artificial definitions of income and saving.[9] But his new terminology is by no means wholly satisfactory. In the reviewer's opinion his entire exposition would have been very greatly facilitated had he adopted outright Robertson's definitions of income, saving, and investment.[10] This would have made it far easier for him to make clear the factors of disequilibrium. For Robertson's terminology enables one to see very clearly the disequilibrating effects of hoarding and dishoarding and of credit creation and debt cancellation. In Robertson's view the saving of the current period is equal to the income of the preceding period minus the consumption of the current period. The

[9] According to these definitions, income included the "normal" return of entrepreneurs. In calculating the income of entrepreneurs no account was taken of windfall profits or windfall losses. Thus in a depression, despite windfall losses, the income of entrepreneurs, as defined, remained unaffected. And, since saving was defined as that part of income which was not spent on liquid consumer's goods, it followed that a large part of the saving in a depression consisted of business losses!

[10] D. H. Robertson, "Saving and Hoarding," *Economic Journal*, September and December, 1933.

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consumption of today may, however, exceed the income of yesterday by the net addition of a certain amount of dishoarding or of credit creation, and vice versa. Thus Robertson speaks of "the power possessed by the public and by the monetary authority to alter the rates of income flow—the former by putting money into and out of store, the latter by putting it into and out of existence."

The current income is determined by the volume of consumption and investment of today. If the consumption and investment of the current period exceed the income of the preceding period, expansion of employment and of income occur. If, on the other hand, current consumption and investment fall below the level of the income of the preceding period, contraction is going on. In this latter case a portion of the current savings finds no outlet either in consumption or in investment, and so "runs to waste." The excess of saving over investment is the measure of the idle funds, or "hoards."

Robertson's terminology does not mean that the current consumption is limited and restricted by the income of the preceding period, as Hawtrey has alleged.[11] The current consumption and investment is largely determined by anticipations of the future, by the state of optimism or pessimism. If the outlook is good, if the prospective rate of profit is high, investment will be increased. If one anticipates a rising income one will plan a larger consumption. The current consumption and investment may, therefore, outrun the volume of the income of the preceding period partly by dishoarding[12] and partly by the use of credit. It is in just these anticipations and the plans that follow them that the dynamics of disequilibrium must be sought. It is because of these factors that saving and investment, as Robertson defines them, may be in disequilibrium and may therefore involve either expansion or contraction.[13]

[11] R. G. Hawtrey, "Saving and Hoarding," *ibid.*, December, 1933.

[12] "Hoarding (Dishoarding) may be alternatively defined as acting in such a way as to decrease (increase) the velocity of circulation of money against output" (D. H. Robertson, "Saving and Hoarding," *ibid.*, p. 401).

[13] Let Y_0 = the income of the preceding period; Y_1 = the income of the current period; C_1 = the consumption of the current period; S_1 = the saving of the current period; and I_1 = the investment of the current period. Then $S_1 = Y_0 - C_1$ or $Y_0 = C_1 + S_1$; and $Y_1 = C_1 + I_1$. Therefore $Y_1 - Y_0 = I_1 - S_1$.

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Keynes, refusing to adopt this terminology, is hard put to it to find a satisfactory scheme of exposition. One is never clear precisely what his terminology means. He defines saving and investment as always equal. In terms of the real phenomena, obviously saving must always equal investment; but in terms of the receipt and disposition of money funds, such a terminology makes it very difficult to handle satisfactorily the important concepts of hoarding and dishoarding, credit creation and debt cancellation. In a cumbersome manner Keynes in fact obviates the difficulty by explaining that individuals may strive to save a certain given amount, but this attempt is bound to fail if the volume of realized investment falls below the planned saving. Thus he finds his disequilibrium between planned individual saving[14] and realized investment. "The decisions to consume and the decisions to invest between them determine incomes." If planned saving exceeds realized investment the income of the community is driven down to a point at which the planned saving and the realized investment equate. If planned saving and realized investment equate, there would be no tendency toward any further change in income and employment. Thus equilibrium is reached only when the propensity to consume and the inducement to invest stand in a particular relationship to one another.

It is, moreover, difficult to be sure precisely how Keynes would measure quantitatively the propensity to consume. Is it the ratio of anticipated consumption to anticipated income, or is it the ratio of the planned consumption of the current period to the realized income of the preceding period?[15] If it is the former, then, indeed, the propensity to consume might remain very nearly constant, regardless of fluctuations in optimism and pessimism, and in this event one might speak, as Keynes at times does, of a more or less fixed consumption behavior pattern—a fixed propensity to consume.[16] If, however, it is the latter, then the propensity to consume would fluctuate violently with waves of pessimism and

[14] See pp. 83–84, 211.

[15] A third possibility would be the ratio of realized consumption to realized income.

[16] This statement is not altogether true, since Keynes's "anticipated income" does not adequately take account of anticipated increases in the market values of capital assets (see p. 56).

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optimism. At times he speaks as though this were the case, for he says that if the community is optimistic about a rapid rise in income (in consequence, let us say, of prospective windfall profits in the speculative market) then the propensity to consume rises. In the latter event, the propensity to consume might rise above unity, since current consumption might easily exceed the realized income of the preceding period. All these difficulties and obscurities arise from Keynes's failure to give exact definitions and to employ them consistently. While terminological difficulties are more successfully handled in this book than in the *Treatise*, the treatment is nevertheless by no means satisfactory.[17]

Returning to the main argument, why, according to Keynes, does not the continued pressure of savings force the rate of interest[18] down below the marginal efficiency of capital? The answer is that the loan rate is not merely a pure interest rate; it includes also the cost and risk of lending. Thus, if one assumes that the pure rate were driven to zero, and that the cost and risk of lending were 2 per cent, it is clear that the minimum rate could never fall—so long as there is the alternative of hoarding—below this 2 per cent. In addition there is the special risk (a risk which becomes greater the lower the rate received) that any slight rise in the rate of interest in the future will drive the capitalized value of the investment down to a point at which the entire interest earnings have been wiped out. At the present moment, with the very low yield on long-term government bonds, a slight rise in the rate of interest would cause an appreciable loss on the principal. This is the danger which banks now run in holding long-term government bonds and which causes them, in large part, to prefer complete liquidity. Thus, below a certain interest rate, complete liquidity is deemed preferable to investment. The rate

[17] See pp. 27–29, 50–51, 61–64, 90–98, 110–12, 261.

[18] With respect to Keynes's criticism (chap. xiv) of the neo-classical treatment of the theory of interest, it should be noted that circular reasoning (such as he here attacks) can be found in all partial analyses of isolated factors in which it is necessarily assumed that "other things remain equal." One can get out of the circle only by the method of the general equilibrium analysis. Moreover, his own interest theory is wholly inadequate, since it leaves out of account the most important variable, the marginal efficiency of capital.

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of interest, therefore, fails to fall to the point to which it would have to be driven in order that the whole flow of planned savings might find a ready outlet in investment. Taking, therefore, the propensity to hoard (liquidity preference) in conjunction with the relatively constant propensity to save, it is discovered that the rate of interest does not equilibrate the volume of planned individual saving and realized investment. In consequence, a part of the available purchasing power in the community finds no outlet in the market. Unemployment, reduced output, and declining income ensue until a level of impoverishment is reached at which the propensity to consume is increased sufficiently so that the flow of planned individual saving equates with the volume of realized investment. For, with a higher ratio of consumption to income, the marginal efficiency of capital now rises to the level of the rate of interest. At this point an equilibrium is reached. The rate of interest now equates with the marginal efficiency of capital, and planned individual saving with realized investment. But this point of equilibrium is one at which there is underemployment of the factors of production. Until there is a change: (1) in the propensity to consume, (2) in the marginal efficiency of capital, or (3) in the rate of interest, this equilibrium position remains fixed.

By what policies might the industrial system be shoved off this dead center of underemployment equilibrium? Keynes considers, in this connection, the rôle of wages, the rôle of money, the rôle of income distribution, and the rôle of socially controlled investment.

Keynes does not deny (as doubtless many superficial readers will conclude) the possible efficacy of reduction in wage rates as a means of lifting the economic system to a higher equilibrium position at fuller employment. He admits that a reduction in wage rates would release a proportion of the money supply and tend to lower the rate of interest. But he holds that there are other ways in which this same end could be accomplished without the social cost of wage reduction, and that it is therefore folly to resort to this method. Keynes admits, moreover, that a general systematic scheme of wage reduction, carried out by a highly integrated or

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authoritarian society, might prove effective in raising the marginal efficiency of capital. But in Western democracies this method is not applicable—wage reductions, in fact, come piecemeal, now in this industry and now in that. The effect of such wage reductions upon political confidence and popular discontent might be to raise materially the schedule of liquidity preference. Moreover, if the reduction in wage rates leads to the expectation of a further wage reduction in the future the effect on current investment is likely to be unfavorable. In addition the transfer of income from wage-earners to other factors is likely to diminish the propensity to consume. For these reasons, piecemeal reductions, which leave the future uncertain, are not likely to prove an effective method of increasing employment. Wage reduction, moreover, tends to load the whole weight of any existing maladjustment upon the single factor, labor, and this is surely inequitable. Finally, the wasteful and disastrous struggles, to which this method almost certainly gives rise, threaten the whole social fabric and make it an impracticable device in the modern world. If the wage level is too high, other methods must be found of increasing the marginal efficiency of capital to a point at which equilibrium at full employment may be reached.

With respect to Pigou's theory of unemployment Keynes does not disagree with the static relationship which Pigou finds between the rate of real wages and the volume of employment. What he does charge (surely without justification) is the failure of Pigou to analyze the dynamic factors which control the rate of real wages, especially the factors—the marginal efficiency of capital and the rate of interest—which control the volume of investment.

Everything considered, a flexible wage policy as an instrument of control is ruled out as dangerous—and, indeed, it is argued that, under the institutional arrangements of Western democracies, genuine stability can better be achieved by an inflexible wage policy. Other methods of control must be discovered to secure full employment.

To this end, money plays for Keynes an important rôle, although less important in this book than in the *Treatise*. A con-

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trolled rate of interest, relentlessly held at a point below the marginal efficiency of capital and driven still lower as marginal efficiency falls with fuller investment, might eventually achieve—possibly even within a generation—the condition of completely "full investment." This means that the supply of capital would have been increased to a point at which it would yield no net return over its replacement cost. At this point, the *rentier* class would be eliminated, and capital as a factor in production would have made its full contribution to maximum output.

A difficulty with this method—and one which Keynes sees—is that if full employment were reached prior to the point of full investment inflation would set in. To prevent inflation the rate of interest would have to be raised to the level of the marginal efficiency of capital. But if equilibrium at full employment were reached short of full investment, and if the society really wished to achieve a condition of full investment, resort would have to be made to other methods, such as direct social control of the volume of investment.

If a controlled rate of interest should prove quickly effective in achieving full employment, and if this policy were joined with a policy of taxation designed to bring about more equal income distribution, it might turn out that the rate of accumulation would be even lower than in the existing society. This would place us even farther than now from the condition of full investment. Should it therefore turn out to be an easy matter to achieve full employment by means of a controlled interest rate it might not be desirable, Keynes thinks, to increase the propensity to consume. For, at full-employment equilibrium, consumption becomes competitive with investment, and this would prevent the society from moving toward that level of productivity which full investment would make possible.

The relentless maintenance of a sufficiently low rate of interest to maintain full employment, Keynes points out, is unattainable in an international gold-standard system. For if you must defend your balance of payments against gold drains by raising the rate of interest you thereby sacrifice the goal of full employment. Thus

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the rigorous maintenance of an adequately low interest rate involves the adoption of a policy of flexible exchange rates.

In Keynes's view the condition of underemployment equilibrium will inevitably persist indefinitely in modern societies unless drastic measures are taken to control the determinants of employment—namely, the propensity to consume, the marginal efficiency of capital, and the rate of interest. Is this position tenable? Is it true that the condition of underemployment equilibrium (without action such as that indicated above) is stable? I do not think it is, unless one introduces certain definite assumptions which Keynes does not do.

There is one necessary condition, in my view, without which stable underemployment equilibrium is not possible. It is the condition of cost rigidity (including wage rates) and monopolistic control of supplies. And this situation is made much worse should it turn out that we are approaching a society in which the outlets for investment are likely to prove more limited than in the past century.

The current orthodox theory—represented, for example, by Pigou—has so fully elaborated the theory of underemployment equilibrium, under conditions of cost rigidity and monopolistic control of supply, that it is only necessary here to make reference thereto. We can be reasonably certain that these restrictive institutional factors and rigidities will continue to prevail to a sufficient degree in the decades ahead to produce a very considerable amount of unemployment apart from the normal cyclical fluctuations. It will, therefore, be quite impossible from a mere observation of the course of future events to determine whether or not Keynes's analysis is valid.

With respect to economic progress, the rapid development of new products, new processes of production, new ways of utilizing natural resources, and new combinations of the productive factors have the effect of raising the marginal efficiency of capital and thereby stimulating investment. Thus economic progress constantly tends toward equilibrium at full employment. Should it turn out, however, that the next decades will witness a relative stagnation in innovations in the utilization of the resources of

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nature, the marginal efficiency of capital may (in view of existing and prospective cost rigidities) fall to a point so low as to produce a stagnation in investment.[19] In the past enormous investments have been made in large capital-consuming developments, such as railroads, roads, and other public utilities. It is not impossible that the technological innovations of the future will be of a character that will require less capital than many of the developments of the last century. Moreover, certain types of technological innovations are definitely capital economizing rather than capital using.

The frontier for the entire world is largely gone and population is approaching stabilization—if not, indeed, decline.[20] This affects the outlet for the investment in durable goods both at home and abroad. Rural electrification schemes, housing projects, and the like, carried out under the stimulation of low interest rates, may, however, turn out to be really important investment outlets.

In view of the prevailing (and probably increasing) cost rigidities, and in view of the possibility of a slowing down in capital-consuming technological innovations, the problem of structural, or secular, unemployment (altogether apart from the cyclical unemployment of ordinary industrial fluctuations) is almost certain to present itself for solution in the decades before us. The all-

[19] Unemployment and stagnation, moreover, foment psychological conditions which intensify the international strain and threaten world-chaos.

[20] "And if some approach to an even rate of growth was attained in the nineteenth century, when both population and the area of effective economic intercourse were rapidly increasing, it may turn out (paradoxically enough) to be harder to attain in a planet which, thanks to the activities of the prospector and the pioneer and to the success of the propagandists of birth control, is rapidly ceasing to be a worthy member of an expanding universe."

"[Thus] it seems evident that the ship of economic life may be set a problem in re-orientation which transcends the capacities alike of its navigators and of its monetary steering-gear. Under such conditions the popular instinct which finds the root cause of dislocation in undigested plenty may be a surer guide than the laborious but one-eyed analysis which finds it in flouted scarcities and unjustified rigidities. . . . . But again, if private enterprise remains sovereign, can it, at its most successful, find any way of countering slumps save by the perpetual stimulation of increasingly meretricious wants and increasingly hectic habits of life? Can it, consistently with its own nature, succeed in the more subtle task of transmuting into diffused leisure the concentrated unemployment of today?" (D. H. Robertson, *Stand der Konjunkturforschung* [Festschrift für Arthur Spiethoff, 1933], pp. 240–41.)

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important question therefore (whether or not Keynes's theoretical analysis of underemployment equilibrium is correct) is how to remedy this situation. Keynes's proposals are designed to offer a substitute for a completely planned socialistic or communistic economy. His solutions are, as we have seen: (1) the rigid maintenance of the rate of interest below the marginal efficiency of capital until full employment is reached, (2) the forced redistribution of income through taxation designed to increase the propensity to consume, and (3) socially controlled investment.

The first proposal is in line with current monetary theory. But efforts at general monetary control have already revealed the weakness of this method. Indirect control—open-market operations and discount policy—is in process of being supplemented by direct monetary intervention (witness current measures to control the volume of funds placed at the disposal of the stock market) which borders on regimentation and rationing—a kind of monetary NRA. The third proposal goes far in the direction of a planned economy and might, indeed, lead straight into thoroughgoing socialism. How far taxation of incomes and wealth (the second proposal) may be carried without breaking down is problematical. Whether or not a drastic program of taxation carried far enough to effect a genuine redistribution of income is compatible with a system of private enterprise and private initiative; whether or not such a program would only serve to make a "flat situation still flatter," thereby leaving no alternative except complete socialization, may perhaps finally be decided at the bar of history.

It will be noted that all of these methods seek to establish full employment either: (1) by a curtailment of the volume of individual savings through a redistribution of income, or (2) by forcing these savings into investment at low interest rates through a program of socially controlled investment. But there is a vast difference between a spontaneous expansion of investment and employment, such as we witnessed in the nineteenth century, and a forced investment such as Keynes seeks to bring about by artificially contrived measures. When spectacular fields for profitable investment are opened up through the development of new re-

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sources, the introduction of technological innovations, the expansion of population, and the growth of new industries, then savings are sucked up, labor is scarce, and industry booms through the drawing power of an expanding demand. When, however, savings must be forced, the outflow of funds into real investment becomes difficult and sluggish, and business is likely to stagnate—unless, indeed, the state goes the whole way and assumes full entrepreneurial responsibility.

In brief, it is not improbable that the continued workability of the system of private enterprise will be made possible, not by changes in prevailing economic institutions (such as those advocated by Keynes), but rather by the work of the inventor and the engineer. Just as technological progress has been mainly responsible for the great advance in real wages and in standards of living during the last century, so also it may well turn out that in the future we shall have to look to new outlets for profitable investment—new discoveries in technique, new ways of utilizing nature's resources, new products, and new industries—if we expect the prevailing economic system to survive.

Whether or not Keynes's proposals will in fact prove effective, it is clear that they are currently popular and are likely to be tried on an expanding scale. Modern communities appear to be in process of reverting to the behavior patterns of the precapitalistic period. Leisure and luxurious consumption were leading characteristics of that era. Numerous holidays, magnificent entertainments, prodigality in consumption (*vide* cathedrals, castles, art products requiring infinite detail and leisurely, time-consuming workmanship)—these distinguish the precapitalistic period from the nervous speed and the emphasis on thrift and saving which characterized the nineteenth century. Keynes's economic system is, as he himself admits, a reversion to the economic doctrines of mercantilism. Modern societies are, in his view, being driven by the logic of events into pursuit of the same ideals which the mercantilists cherished. They were right, he thinks, in the enforcement of usury laws designed to maintain a low rate of interest. They were too close to the experience of an exuberant prosperity and rising prices, which the inpouring of precious metals from the

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new world had generated, to overlook the importance of an abundance of precious metals. They were right, he thinks, in their preoccupation with the balance of payments and their fear that a drain on the precious metals would, by affecting the terms of lending, check the growth of investment and employment. They were right in their "deep rooted belief in the utility of luxury and the evil of thrift." These are the corner stones of Keynes's economic philosophy, and it is not difficult to see that, whatever may be true of the correctness of his theoretical analysis or the workability of his proposals, the enigma of unemployment and business depression has already impelled modern capitalistic economies far toward the reconstruction of a mercantilistic world.

In conclusion, a word should be said about Keynes's view of the trade cycle. Let it be noted that *The General Theory of Employment, Interest and Money* is only incidentally concerned with the trade cycle. Cyclical fluctuations may occur in either a full-employment equilibrium system or in an underemployment equilibrium system. The theory of the trade cycle is, therefore, something substantially apart from the theory of long-run underemployment or full-employment equilibrium.

In his "Notes on the Trade Cycle" (chap. xxii)—a brilliant performance, even though, as Keynes admits, it contains essentially nothing new—Keynes finds that the cycle is mainly due to fluctuations in the marginal efficiency of capital. The movement is cyclical in the sense that the forces propelling the system upward at first gather force cumulatively but gradually lose their strength until a point is reached at which they tend to be replaced by opposite forces, which in turn gather force cumulatively until they, too, wane. The movement is cyclical, also, in the sense that these upward and downward movements occur with a recognizable degree of regularity in time-sequence and duration. A complete explanation of the cycle must, moreover, involve an analysis of the crisis—the sudden and violent turning point from boom to depression.

Let us consider these points briefly and in their inverse order. The phenomenon of the crisis may be explained by the precarious character of expectations of future yield on new investment—

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expectations based on highly shifting and unreliable evidence. The boom progresses on overoptimistic expectations. Disillusionment brings a sudden and drastic collapse in the prospective rate of profit—the marginal efficiency of capital.

Periodicity of the cycle rests upon two bases: (1) the length of life of durable assets in relation to the normal rate of growth, and (2) the carrying costs of surplus stocks.

The increase in the marginal efficiency of capital awaits the depreciation and obsolescence of the capital stock accumulated during the boom. This, of course, is nothing new. Karl Marx, Aftalion, Robertson, and others have stressed the relation of average durability of capital to the length of the depression.

The carrying costs of surplus stocks is the second important factor, in Keynes's view, which determines the duration of depression. The carrying charges tend to force the absorption of surplus stocks within a certain period, usually within three to five years. While the process of stock absorption is going on there is negative investment and, therefore, deflation and unemployment.

Keynes's emphasis on fluctuations in the marginal efficiency of capital as the moving cause of the trade cycle is in line with Spiethoff's analysis, though there are many points of difference. Moreover, the conclusion that the collapse in the marginal efficiency of capital may be so complete that the most favorable monetary condition is quite inadequate to produce a revival, is also in line with Spiethoff's view. With Spiethoff, however, the increase in the marginal efficiency of capital (without which revival would be impossible) is caused by inventions, discoveries, the development of new resources, new products, and new industries. With Keynes the absorption of stocks, the depreciation and obsolescence of fixed capital, and the effects of these upon the prospective yield of new investment, are the points stressed.

Keynes supports, as one remedial measure for the trade cycle, the program of redistribution of income designed to increase the propensity to consume. However, according to his own analysis, the cause of the trade cycle is fundamentally to be found in *fluctuations* in the marginal efficiency of capital, and it is difficult to see how a permanent change in the distribution of income could affect

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these fluctuations. In other words, at this point Keynes is clearly confusing the problem of long-term equilibrium with the problem of short-term cyclical fluctuations.

Keynes's new book, as with everything which comes from his pen, will stimulate thinking on fresh lines in the field of economic dynamics. There are too many obscure corners in our science to permit of comfortable dogmatism. The economic order is clearly in a state of transition to no one knows what. The system is half rigid, half flexible. A theoretical apparatus applicable to a flexible system is not always adequate for an analysis of current economic life. The problem of wage rigidity, for example, is not as simple today as formerly. A system which stands somewhere between a laissez faire economy and a regimented economy presents exceptionally difficult problems for public policy. We are living in a time when economics stands in danger of a sterile orthodoxy. The book under review is not a landmark in the sense that it lays a foundation for a "new economics." It warns once again, in a provocative manner, of the danger of reasoning based on assumptions which no longer fit the facts of economic life. Out of discussion and research will come bit by bit an improved theoretical apparatus (Keynes's interest theory contains promising suggestions) and a more accurate appreciation of social psychology (the brilliant chapter on long-term expectation) and of the precise character of the economic environment in which humans act as individuals and in groups. The book is more a symptom of economic trends than a foundation stone upon which a science can be built.

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