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A Reconsideration of Hobson's Theory of Unemployment[1]

The purpose of this essay is to argue for a reconsideration of Hobson's theory of unemployment. It may be objected that such a task is unnecessary : has not Hobson's place in the history of economic thought been ensured by the praise which he received from the author of the *General Theory of Employment, Interest and Money?* The answer to this is that Keynes, though generous in his praise, was ungenerous in the account he gave of Hobson's theory, largely because he contrasted Hobson's analysis of the origin of depression with his own theory of a state of under-full employment equilibrium. Since Hobson's theory comprehended the latter situation Keynes' criticism of Hobson may reasonably be challenged, *viz.*, that the "root of his mistake" lay in "his supposing that it is a case of excessive saving causing the *actual* accumulation of capital in excess of what is required, which is, in fact, a secondary evil which only occurs through mistakes of foresight ; whereas the primary evil is a propensity to save in conditions of full employment more than the equivalent of the capital which is required, thus preventing full employment except when there is a mistake of foresight." [2]

[1] John Atkinson Hobson, 1858-1940. The following works will be referred to in this paper, using the indicated abbreviations in footnote references.

The Physiology of Industry (with A. F. Mummery), John Murray, London, 1889. (*Industry*).

The Evolution of Modern Capitalism (2nd Edn.), Walter Scott, London, 1901. (*Capitalism*).

The Industrial System (2nd Edn.), Longmans Green, London, 1910. (*I. S.*).

An Economic Interpretation of Investment, The Financial Review of Reviews, London, 1911. (*Investment*).

The Economics of Unemployment, George Allen and Unwin, London, 1922. (*Unemployment*).

Rationalisation and Unemployment, George Allen and Unwin, London, 1930. (*R. U.*).

"Underconsumption, An Exposition and a Reply," *Economica*, 1933, pp. 402-417, 425-427. (*E.*).

[2] *General Theory*, p. 367.

Later writers have not clarified the picture and are even contradictory. Professor Hansen, whilst admitting that Hobson does "make clearer than his predecessors the role of growth—changes in technique and increase in population—in opening investment outlets," argues that "with respect to consumption, his treatment . . . suffers . . . by not having the concept of a *schedule* relating consumption to income." [1] On the other hand Dr. Klein has stated: "while Hobson analyzed, in some detail and very brilliantly, the saving process, he failed to give a good account of investment and its determinants . . . We find that Hobson had a clear picture of what determines the savings schedule." [2]

When eminent authorities disagree there is, perhaps, some justification for a re-examination of Hobson's work. A reasonably comprehensive account of his theory does not exist, as far as I can discover, though several writers have shown an awareness of the real nature of his contribution.[3]

I.

Hobson's analysis follows a pattern set by a stream of writers which includes such names as Sismondi, Malthus, Rodbertus and Marx. He was concerned with the analysis of a progressive economy in which the effects of capital growth resulting from saving were explicitly taken into account. He argued that the proportion of national income which people will want to save and invest is not necessarily the proportion of income which can profitably be invested. The analysis of the disharmony between these two aspects of the saving process explains the necessity of a self-generating cycle combined with secular growth in a modern industrial economy. The unemployment theory of Keynes features implicitly in this

[1] A. H. Hansen, *Business Cycles and National Income*, New York, 1951, p. 255.

[2] L. R. Klein, *The Keynesian Revolution*, New York, 1947, p. 137.

[3] *e.g.*, W. Mitchell, *Business Cycles*, New York, 1927; E. F. M. Durbin, *Purchasing Power and Trade Depression*, London, 1933; O. Lange, "The Rate of Interest and the Optimum Propensity to Consume," *Economica*, 1938; E. D. Domar, "Expansion and Employment," *American Economic Review*, 1947; J. Robinson, "Mr. Harrod's Dynamics," *Economic Journal*, 1949.

system in the form of a discussion of the forces which bring the contraction phase of the cycle to an end.

It is necessary, at the outset, to draw attention to a matter of definition which has probably contributed to the misunderstanding of Hobson's theory. He was obsessed with a normative definition of "saving" and really wished to reserve the use of this word for those dispositions of money income which result in net capital formation. Thus :

> "Spending means buying commodities with income; saving means buying productive goods or instruments with income." [1]

> "The *real economic function* of saving must be clearly kept in mind. It does not consist in not spending . . . It consists in paying producers to make more non-consumable goods for use as capital . . . " [2]

Hobson, therefore, often used the word "saving" in the sense of "net investment," *e.g.*,

> "The real income of a community in any given year is divisible into two parts, that which is produced and consumed, that which is produced and not consumed—*i.e.*, is saved." [3]

But he was well aware that all acts which the individual regards as "saving" do not necessarily result in capital formation. He did not deny that individuals might hoard or hold bank deposits, though he thought hoarding abnormal,[4] or buy existing securities. His attitude was that such acts do not constitute "social saving" or "efficacious saving" but he neglected the precaution of using a separate term to define them. He realised the importance of individual non-social saving.

> "From the stand-point of the individual who saves, his action consists in a refusal to demand commodities, a not-spending, or, more strictly, a postponement of

[1] *I. S.*, p. 50.
[2] *Unemployment*, p. 34, my italics.
[3] *Capitalism*, p. 207, also *cf. I. S.*, p. 55.
[4] *I. S.*, p. 50.

spending. In primitive industrial societies, or *in disturbed conditions of more advanced societies, much refusal to spend takes the form of hoarding money . . . An increase of hoarding inevitably tends to depress trade . . .*"[1]

The view that hoarding is abnormal except in disturbed conditions is quite reasonable. Hobson usually made it clear from the context of his argument whether he meant social or private saving, but he needs a careful reader.

Hobson had a clear concept of a personal schedule relating saving to income.

> "Though we fear inductive evidence upon such a point is not available, it will hardly be disputed that the proportion of saving is generally in direct ratio to the sizes of incomes, the richest saving the largest percentage of their income, the poorest the smallest." [2]

> "Generally speaking, the highest rate of saving will be found in those classes of business men who, after attaining a fairly high level of comfort, find their incomes still rising rapidly." [3]

He argued unconvincingly that the larger savings-income ratio of the rich arose because their incomes consisted extensively of "unproductive surplus," *i.e.*, of factor rents based on natural or contrived scarcity. He felt that consumption was related in some mysterious "natural" way to the effort involved in earning an income.[4] For this reason he often referred to the savings of the rich as being "automatic." Methodologically, Hobson's hypothesis of the personal savings schedule did not need the support of his dubious *a priori* "proof" but his focus on the entrepreneur as being the main source of monopolistic power and of savings was important because it partly explains his aggregate schedule.

[1] *I. S.*, p. 50, my italics.

[2] *I S.*, p. 295. See also *Unemployment*, p. 36, for a revealing tabular "schedule."

[3] *Investment*, p. 36.

[4] See his *The Problem of the Unemployed*, London, 1896 ; *I. S.*, Chapters 4–6 and p. 294. In *Unemployment*, p. 45, he has cogent reasons to explain the relatively lower savings of the poorer classes.

For a theory of unemployment it is, of course, necessary to work in terms of a hypothesis concerning the co-variation of aggregate savings and aggregate income. Such a concept forms a basic part of Hobson's theory.

> " . . . if there exists a normal tendency to try to save and apply to capital purposes an excessive proportion of the general income, we have a valid explanation of the actual phenomena of fluctuations and depressions." [1]

He assumed that the proportion of the national income which is saved varies according to the phase of the cycle, being relatively high in prosperity and low in depression. Two factors accounted for the variation. First, "a conservatism in the arts of consumption" which causes changes in consumption to lag behind changes in income in both directions. Second, changes in the level of income over the cycle are associated with shifts in the distribution of income, profits rising relative to wages in prosperity and declining in depression. The following quotations illustrate his argument.

> "The standards of life are for most people more conventional and more stable than the standards of work. The result is that where the command of the new wealth due to industrial progress passes largely into the hands of a small class, much of it is accumulated and reapplied to industry from sheer inability to make consumption keep pace with rising income." [2]

> "Though more employment will give higher aggregate wages, wage-rates will not rise so fast as prices and profits . . . It signifies for us the important fact that during rising prices and reviving trade the distribution of the product, *i.e.*, of real incomes, is favourable to the employing and capitalist classes, unfavourable to labour . . . since saving . . . comes mainly from the accumulation of surplus income of the capitalist and employing classes, the under-saving which accompanied depression now

[1] *Unemployment*, p. 147, see also, p. 124.

[2] *I. S.*, p. 295.

> gives place to what will once more become over-saving when the revival of trade has gone some distance . . . "[1]

> "In every period of depression saving is diminished more than spending. This applies not only to the wage earners whose total contribution to the general fund of saving is never very large, but to the propertied and employing classes, whose large automatic savings are to a large extent virtually cancelled by a trade depression."[2]

The most interesting example of the aggregate schedule occurs in the *Industrial System* and demonstrates Hobson's early understanding of the nature of the under-full employment equilibrium. Hobson is here discussing the effects of an increase in the desire to save in a hypothetical economy previously experiencing full employment. He points out that the attempt to raise the rate and proportion of saving involves a double diminution of effective demand. Less is spent on consumption and this reduces the derived demand for investment.[3] "Since there is a reduced demand both for commodities and for new capital goods, there will be a shrinkage of money income and real income among all industrial classes." [4] What happens to the increased savings which, by definition, cannot flow into new investment? Some, he says, will be hoarded, the remainder will find an outlet in the purchase of existing properties which are sold by those who want to maintain their consumption in spite of declining incomes.[5] Such saving is only a transfer of spending but there remains a net deflationary effect because

> "the class which gets [the money] only maintains its former spending, while the class which parts with it has reduced its total spending. So there remains as a net

[1] *Unemployment*, p. 68. Hobson uses the terms "under-saving" and "over-saving" in the sense of rates and proportions of income relative to the "normal" rate and proportion which would allow full employment. *cf. Unemployment*, p. 135 ; *R. U.*, p. 45 ; *I. S.*, p. 303.

[2] *Unemployment*. p. 56.

[3] His justification for this will be considered presently.

[4] *I. S.*, p. 302.

[5] This argument dates from his earliest work but Hobson may have been influenced by Johannsen's brilliant study, *A Neglected Point in Connection with Crises* (New York, 1908), which he acknowledged.

> effect . . . a reduction of total demand for commodities and new forms of capital . . . reduced employment for capital and labour . . . and shrinkage of the general real income. This is the condition known as depression." [1]

Now he asks the crucial question: "Why does it not continue indefinitely and grow ever worse?"

> "Because," he says, "from the very beginning of the maladjustment between spending and saving a process of readjustment gradually comes into play. Directly a shrinkage in demand for commodities and new productive capital occurs, the lessened rate of production begins to reduce all incomes, including those of the saving class. Aggregate income no longer stands at twenty, but falls to eighteen, or even seventeen. The saving class who were trying to save four out of a total twenty, leaving sixteen for spending, are not willing to save four or even three out of an aggregate income reduced to eighteen or seventeen. Their permanent standard of comfort stands in the way. When the shrinkage of production and of income has gone far enough, not merely is the actual amount of saving reduced, but the *proportion* of saving to spending is brought back towards the normal rate which preceded the attempt to oversave, or even below that rate. When the depression has reached its lowest, there is for a time a state of actual under-saving, *i.e.*, an insufficient provision of new productive capital to meet the reasonable calculations of future demand for commodities." [2]

Although his argument lacks rigour it will be admitted that Hobson gets at the heart of the problem of equilibrium, *viz.*, that the deflationary excess savings are eliminated by the contraction in the level of income which they induce.[3]

II.

The next step is to consider Hobson's analysis of the factors which determine the amount of investment which can

[1] *I. S.*, p. 303.
[2] *ibid.*
[3] *cf.* also, *Unemployment*, p. 55.

profitably be undertaken. From its inception his theory has rested firmly on the basis of a definite capital-consumption ratio,[1] given at a point of time but always being modified by technological development. This concept is justified in his early books by analysis of the nature of the industrial system. The "mutually inter-dependent" nature of the quantities of capital and labour in the main and tributary streams of industrial processes led him to conclude that, under conditions of economic working,

> "pooling together all the productive processes, there must be a definite quantitative relation between the rate of production and the rate of consumption . . . between the quantity of employment of capital and labour and the quantity of commodities withdrawn from the productive stream within any given time." [2]

The capital-consumption ratio sets a limit to the amount of "socially useful" saving which can be done in a progressive economy.

> "A large proportion of the modern social income can be saved because it is possible to put it into costly forms of capital, the services of which will fructify . . . a long time hence . . . railroads . . . new harbours . . . afforestation . . . " etc.[3]

But, he argued, this did not mean that there were no limits to the possibilities—definite limits were set by two factors. "In the first place, most forms of new capital, even in this age of elaborated indirect production by machinery, very soon result in promoting an increased flow of finished goods," so new investment is constrained by future demand for its output if it is to be socially useful. Secondly, investment for the distant future is "restricted principally by our inability to forecast far ahead either the needs of coming men or the most economical modes of providing for them." [4]

[1]It was really a capital-output ratio since he realised that an increase in consumption involved both an increase in machines to make goods and an increase in machines to make machines. See *Capitalism*, p. 195, fn. 1 ; *I. S.*, p. 39.

[2]*I. S.*, p. 41.

[3]*ibid.*, p. 52.

[4]*ibid.*, p. 52.

He concludes :

> "A little reflection will make it evident that this implies the maintenance of a definite proportion between the aggregate of saving and of spending over a term of years . . . If this proportion is exceeded one year it must be curtailed the next . . . Though the proportion . . . is always slowly changing, at any given time it must rightly be regarded as fixed in the sense that there is an exact proportion of the current income which, in accordance with existing arts of production and existing foresight, is required to set up new capital so as to make provision for the maximum consumption throughout the near future. Any miscalculation or other play of social forces which disturbs this proportion, inducing either too much saving or too much spending, causes a waste of productive power and a restriction in aggregate consumption." [1]

Perhaps it needs rather more than "a little reflection" to convert a relationship between capital and consumption into one between a rate of increase of capital and a rate of consumption, but Hobson was quite correct in supposing that the conversion could be made. What he meant was that for steady growth the two sides of the saving process must be compatible. The community will try to save and invest a proportion s of the real national income Y. This must not produce a more rapid rate of capital accumulation than is allowed by the technologically determined capital-consumption ratio. If real capital is denoted by K and real consumption by C, Hobson postulated a ratio of the following type: $K = \beta\,(1 + e)\,C$, where $e.\,C$ is the value of distant future consumption. From this ratio the permissible maximum amount of "socially useful" investment in a period may be derived, *viz.*, $I = \beta\,(1+e) \bigtriangleup C$. For steady growth this quantity must equal the desired rate of real saving from a full employment income, *viz.*, Real Savings $(S) = s.\,Y = \beta\,(1+e) \bigtriangleup C$.

[1] *ibid.*, pp. 53–4.

Since Hobson used the basic identity $Y \equiv C + S$ the equilibrium condition for steady full employment growth is given as :

$$\frac{\Delta Y}{Y} = \frac{s}{1-s} \cdot \frac{1}{\beta\,(1+e)} ,$$

where $\frac{\Delta Y}{Y}$ is the maximum possible rate of growth in real income, given the growth of population and changes in technology. This equation may be regarded as specifying the value of s, the maximum possible proportion of income which can be saved and invested. If s exceeds the permitted value capital would be created at a rate later proved to be excessive ; according to Hobson it would provoke crisis and depression. A value of s below the determined figure implies a rate of growth of capital and consumption below the possible maximum.

Several suppressed assumptions must be made explicit. The simple argument assumes that the quantity of money and the income velocity are constant. Constant money rates of Y, C and I then become increasing real rates as a rate of price fall occurs which is the reciprocal of the rate of real growth due to expansion and innovation. This involves objections, *viz.*, that money wage rates must adjust to allow expansion and that the real value of depreciation funds, bank credit etc. increase and, in effect, raise the rate of desired saving and investment. To meet these objections the quantity of money may be increased to give a constant price level—but now, as Domar has shown,[1] the money rate of investment must grow or the economy cannot. Therefore, in either case, the proportion s in the preceding discussion must be interpreted in a wider sense than the savings of private individuals, it must cover all the savings of the community including new creations of money which finance part of the new investment. This new money is a type of forced saving.[2]

[1]E. D. Domar, *op. cit.*

[2]Hobson showed that he was aware of these considerations in the later versions of his theory. *cf. E.*, pp. 402–5.

All this is now familiar as a result of the work of Harrod and Domar.[1] The relation between Hobson's analysis and that of Harrod may be indicated. Harrod takes the savings-income ratio as given and with the marginal capital-output ratio deduces a "warranted rate of growth" which he compares with the "natural rate of growth" of income needed to maintain continuous full employment. Hobson took the latter rate of growth as a datum and, using a capital-consumption ratio, deduced a "warranted" or "justified" rate of saving. Hobson's "correct proportion" of savings is therefore the proportion which equates the natural and warranted rates of growth of income. In each case there is an allowance for long-range investment which may temporarily absorb savings without giving rise to immediate additions to total output. Hobson's reference to the "waste of productive power" resulting from too much spending (*i.e.*, *s* less than the "correct proportion") amounts to the specification of a warranted rate of growth which is less than the possible natural rate. Hobson's intuition seems to have led him towards the concepts of dynamic equilibrium which Harrod and Domar have developed and analysed. The following statement may be presented to show Hobson's understanding of the implications of the basic growth equation.

> "An increased rate of saving on the part of a community must either take shape in the continuous increase of new forms of capital *produced in expectation of an increase in the rate of growth of future consumption*, or in a compulsory substitution of present for past saving, effected by enabling present over-savers to get possession of properties already in existence which represent past savings. In the latter case, since the acts of saving stimulate no new production of capital forms, they involve a corresponding volume of unemployment." [2]

[1]Harrod, "An Essay in Dynamic Theory," *Economic Journal*, 1939 and *Towards a Dynamic Economics*, London, 1948. Domar, *op. cit.* and "Capital Expansion, Rate of Growth, and Employment," *Econometrica*, 1946.

[2]*I. S.*, p. 305, my italics.

The essence of Hobson's theory was that, whilst for a time the community might save the "correct proportion" of its general income, there would be an inevitable tendency for this proportion to be exceeded. The result would be the development of crisis and depression. But he did not argue that the economy experienced continual over-saving and over-investment. After the crisis the industrial system would experience a period of stagnation, of under-saving and under-investment, lasting until the forces of obsolescence and population growth had once again restored the profitability of large-scale real saving and investment. Some of the details of this cyclical process must now be considered.

III.

It is convenient to begin with the period of prosperity, when, for a time, "the right adjustment between real capital and rate of consumption" has been restored and "a spell of good trade with full employment for capital and labour ensues." [1] The high level of activity is, in part, the result of the expansionary operations of the banking system which becomes infected with the rising confidence of the traders and producers.

Hobson's views on the part played by the forces of psychology and the banking system are interesting. He emphasised the fact that he had no time for theories which explained booms and depressions as "tidal movements in the minds" of business men and bankers.[2] At the same time he realised that the whole "psychological-financial play of credit" was an important feature in the trade cycle. He believed that it could be explained as a secondary and dependent process, grounded on objective factors such as changes in prices and orders which themselves were to be explained by the more fundamental forces of over- and under-saving. Thus he argued :

> "These increased credits express and measure the belief of bankers in the renewal of industrial activity. But

[1] *I. S.*, p. 306.
[2] See *I. S.*, p. 301 ; *Unemployment*, pp. 28, 59.

their belief is based upon the actual evidence of reviving trade furnished to them by their customers, and it is on the strength of this that they extend banking facilities."[1]

For reasons already considered, the period of good trade cannot last indefinitely. The rising level of incomes, the conservatism of consumption reinforced by the changed distribution of incomes cause the rate of saving to rise until it exceeds the "correct proportion." At this stage over-saving means literally over-investment so there is no question of immediate deflation.

> "The immediate effect upon demand for labour of demanding capital goods (the application of savings) is the same as that of demanding consumptive goods." [2]

> "So long as over-saving is translated without delay into over-investment, *i.e.*, the creation of capital goods at a pace proved later on to be excessive, the seeds of the depression thus sown in the economic body are not visible." [3]

The way in which the seeds are sown is important.

In the first place the over-saving would result, he thought, in an excessive multiplication of existing forms of capital. This becomes possible because there is no harmony between the social interest and the self-interest of individuals.

> "It may pay individuals to build new factories and put in new machinery where it would not pay the community to do so, were it the sole owner of the means of production. The knowledge that enough capital is already invested in an industry to fully supply all current demands at profitable prices has no power to deter the investment of fresh capital, provided the new investors have reason to believe their capital can be made to displace some existing capital owned by others." [4]

[1] *Unemployment*, p. 62.

[2] *I. S.*, p. 305.

[3] *E.*, p. 426. Dr. Klein's view (*op. cit.*, p. 137) that: "A high rate of savings which are actually offset by investments provides a net stimulus to the economic system, but Hobson implied that such offsets in both depression and prosperity cause under-consumption and deflation" seems to be contradicted by these quotations.

[4] *Capitalism*, p. 202.

> "It is to the interest of [the company promoter, the builder architect, machine producer, etc.] to bring into the field of production new forms of capital, quite independently of the question whether the condition of a trade or the consumption of the community have any need for them."[1]

Secondly :

> "An important contributary cause of some modern depressions has been the excessive application of capital and business enterprise to certain fields of fundamental industry. Railway construction with its appendages of docks, harbours, warehouses, etc., has been a notorious example." [2]

He quotes Burton, *Financial Crises*, on the link between railway construction and the cycle in the United States from 1848 to 1890, and goes on to say :

> "The statistics of Great Britain's foreign investments bear out this ascription of over-investment in fundamental industries of a speculative order as a precipitating cause of depressions." [3]

While they last such ventures cause full employment in the basic trades of coal, engineering, etc., but, when it becomes evident that they have been taken too far, a financial crisis and an "era of bankruptcy and reconstruction sets in."[4]

It must be noted that, unless the whole blame is to be placed on the company promoter and his colleagues, the root cause of over-investment in Hobson's system must be regarded as the imperfect foresight and unwarranted optimism of those who employ their own or borrowed money in new investment. The time-lag between the act of investment and the flow of consumer goods, which he recognised, makes this quite a plausible theory, though it suggests that psychological factors are rather more than a secondary causal factor as he maintained.

He argued, then, that the unco-ordinated individual decisions of businessmen would lead under conditions of boom

[1]*Capitalism*, p. 203.
[2]*Unemployment*, p. 75.
[3]*ibid.*
[4]*ibid.*

psychology to excessive capital formation and a resulting generalised over-supply of consumer goods. As a result :

> "When trade activity has reached a certain height, the difficulty of finding a remunerative market for all the product at current or even lower prices becomes apparent . . . Markets are visibly over-stocked and the capacity exists to go on over-stocking them." The "keen classes of businessmen"—the merchants and bankers—conclude that the upward movement has run its course ; "the merchant draws in his orders and the banker his credits."[1]

The changed mood of the merchants and bankers is again founded on objective factors—weakening prices and visible over-stocking. But the bankers may close down with a promptitude that brings financial and commercial crisis. Cautiously applied, the credit contraction causes "a longer, slower process of price-fall and depression, leaving large quantities of frozen credits to be liquidated by a gradual marketing of the frozen goods which are the economic counterparts." [2]

The system is now experiencing over-saving and over-production. Attention must be drawn to the precise meaning of these concepts, since Hobson used them in two senses, a fact which probably helped to obscure his argument.

The crisis is precipitated by over-saving in the sense of over-investment, *i.e.*, by a *process* of over-saving. But the creation of new capital forms does not continue on this excessive scale.

> "It must, however, be remembered that this over-saving is not measured by the quantity of new mills, machinery, etc., put into industry. When the mechanism of industry is once thoroughly congested, over-saving may still continue, but will be represented by a progressive under-use of existing forms of capital, that unemployment of forms of capital and labour which makes trade depression." [3]

[1] *Unemployment*, p. 63. Also, *I. S.*, p. 299, 301.

[2] *Unemployment*, p. 63.

[3] *Capitalism*, p. 207, also pp. 176–9.

Overproduction may also exist as a *state* of excessive stocks in conditions which might be described as a *process* of underproduction.[1]

These careful definitions were not repeated in later works with the result that references to over-saving and overproduction in the sense of *states* can be misconstrued as referring to *processes*. But Hobson's meaning was usually quite clear from the context of his discussion and he frequently referred to depression as being a condition of *under*-saving. It is hard to understand how Keynes could have overlooked such statements as the following :

> "I wish to make it quite clear that my general charge of over-saving as the root-cause of fluctuations and depressions is quite consistent with the admission that during a deep depression there is under-saving in the sense of a rate and proportion of saving to spending inadequate to the normal needs of a progressive industry."[2]

To revert to the main argument : the crisis with its weakening of prices and contraction of credit causes a drastic change of business confidence. Merchants cancel their orders and entrepreneurs realise the futility of constructing new capital under such conditions. Credit is required "not in order to earn profits but to prevent collapse." New savings instead of going into the capital market are held on deposit in banks. The result is general contraction.

> "In this situation industrial investment slows down. Money available for investment waits in bank reserves, or is utilised for short loans. This admitted "lag" of investment checks further the processes of production, especially in the basic industries, creating more unemployment and wage reductions, which again react in shrinking demand for final commodities." [3]

[1]*Capitalism*, pp. 168–9.

[2]*Unemployment*, p. 135. *cf.* also *I. S.*, p. 303 quoted earlier, and *R. U.*, p. 60, for an illuminating comment on the current depression along the same lines.

[3]*R. U.*, pp. 132–3. *cf.* also *I. S.*, pp. 300–306 ; *Investment*, pp. 86–8.

Hobson realised that he had to meet the objection that the "glut" of consumer goods which resulted from the over-investment would be absorbed by extension of demand induced by price reductions. He argued that this would not happen.[1] In the first place,

> "the discovery that an excessive power of production at the former price level exists may not lead to a cutting of prices . . . It may lead . . . to a combination of producers to restrict output and hold up the prices. This, of course, involves the refusal to utilise the full available productive power of capital and labour." [2]

Secondly, he saw clearly that general price reductions were ineffective equilibrators because they involve a more than equivalent fall in aggregate money incomes. The initial price reductions would lead to some increase in consumption but not enough to prevent the emergence of a "glut" of consumer goods and, as a consequence, considerably diminished production and employment, usually with wage decreases for those who remained employed. The reduction in activity quickly reverses the initially favourable effect of the falling prices. The real check to contraction, he argued, is provided by the conservatism of consumption, which, in conjunction with the generally declining real and money incomes causes the almost complete disappearance of savings.[3]

The duration of the depression Hobson linked to the time needed to absorb the excessive stocks of fixed and working capital, the former being absorbed by obsolescence, under-maintenance and population growth,[4] the latter by the

[1]Price reductions which follow from reduced costs are not concerned here. These he argued would cause no trouble provided the savings-income ratio was maintained at the "correct" figure. *cf. R. U.*, pp. 48–9, 128–9; *E.*, p. 403.

[2]*Unemployment*, p. 54. He admitted that this objection might have been invalid in an age of small competitive businesses.

[3]*Unemployment*, pp. 50–55, also *Industry*, Chap. 4. His theory led him to advocate resistance by workers to wage cuts since this would, by improving their position relative to profits, reduce the savings ratio and make for fuller employment. Like Keynes, he saw the further advantage of wage-rigidity in reducing the severity of price fluctuations. *Unemployment*, pp. 90–1.

[4]*I. S.*, p. 306; *R. U.*, p. 134; E., p. 417.

reduction of current production of consumer goods below the level of current demand.[1]

His theory of recovery resembles that of Hawtrey in focussing attention on the merchants and traders, but their behaviour is not linked to the unplausible feature of interest rates, it depends essentially on market conditions and forecasts. He argued that eventually the excessive stocks of consumer goods would become depleted and that it would become obvious to businessmen that current production would be insufficient to meet future expected demand. The wholesalers are usually the most sensitive and the first to take action. "In anticipation of a growing volume of sales at higher prices they make contracts with manufacturers and other producers for future delivery of materials and goods."[2] These producing firms need to replenish their working capital so they apply to the banks for credit. The banks are prepared to expand the supply of credit because they regard the new contracts of the merchants as proof of reviving trade.[3] The effect of the new money and the demand for raw materials causes an initial rise in prices which assists the generation of optimism, since Hobson's businessman pays great attention to current trends and prices. Also in conjunction with the wage-lag it implies rising profits. With rising prices, profits, output and consumption we are climbing back into the period of prosperity and the cycle is repeated.[4]

Hobson was criticised by Keynes[5] for neglecting the part played by the rate of interest. Formally his argument would have been improved by the inclusion of a theory of interest but the omission in no way affects the essentials of his argument.

. There was no real difference between Hobson and Keynes regarding the upper turning point. Keynes admitted that the predominant cause of the crisis is

[1]*Unemployment*, pp. 60, 67, 92.
[2]*Unemployment*, p. 60.
[3]*ibid.*, pp. 60–2.
[4]*Unemployment*, pp. 61–2.
[5]*General Theory*, p. 370.

> "not primarily a rise in the rate of interest, but a sudden collapse in the marginal efficiency of capital . . . particularly in the case of those types of capital which have been contributing most to the previous phase of heavy new investment." [1]

This was precisely the point that Hobson had made.

Hobson differed from Keynes to the extent that he thought that, after the crisis period, interest rates would be likely to fall.[2] His analysis of the capital market during this period was rather crude, though it did not stop him from getting the correct answer. He considered that any firm with genuine opportunities for real investment would have no difficulty in raising money at low rates of interest, but that real investment on the whole would collapse because of the obvious excess capacity in the majority of established industries.[3] Low rates of interest would not "make possible all sorts of enterprises hitherto unprofitable."

> "Though cheap investment money and cheap bank credits are helpful when for other causes recovery begins, experience shows that until definite signs of recovery have appeared in the shape of rising prices and increased orders, cheap money has very little influence in promoting recovery." [4]

His general argument on the short run collapse in the demand for new capital goods was accepted by Durbin [5] although he differed from Hobson on other matters. Later writers have clarified the theoretical point by showing that any expansionary effect due to lower interest rates could be obliterated by the shift in the investment demand schedule caused by the collapse of consumer demand.[6]

[1] *General Theory*, pp. 315, 316.

[2] *E.*, p. 411.

[3] *Investment*, pp. 84–8 ; *I. S.*, p. 274 ; *Unemployment*, p. 134 ; *R. U.*, p. 60 ; *E.*, p. 409–12. The statement (*Unemployment*, p. 135) that capital would not be available seems to have been a slip since it is clearly contradicted in his earlier and later works.

[4] *E.*, p. 411.

[5] *op. cit.*, pp. 101–2.

[6] Neisser, "General Overproduction," *Journal of Political Economy*, 1934, p. 447 ; Lange, *op. cit.*, p. 24.

IV.

This survey of Hobson's contribution has necessarily been restricted to a description of the main content of his theory. To the extent that he anticipated later developments his theory is naturally open to all the relevant criticism of the later work, which it would have been superfluous to include here. Though it has been impossible to convey adequately his deep understanding of economic processes it must be admitted that the formulation of his theory was rather crude, it being set out too often in the language of journalism rather than of science. For this defect his exclusion from academic life and discussion must be blamed which denied him the environment needed for the rigorous development of his theories.[1] Despite his faults of exposition he presented a complete theory of the cycle in the sense that the whole recurrent sequence of prosperity and depression was explained in terms of a basic set of hypotheses. Whilst the core of his theory consisted of the real factors of the variable savings-income ratio and the capital-consumption relation his theory also depended on psychological influences to a greater degree than he believed to be the case. In periods of prosperity rising prices generate a mood of optimism which leads to the automatic investment of new savings ; in periods of falling prices there is a complete reversal of mood and general pessimism induces a widespread hoarding of new money savings and a refusal to contemplate new investment. But this reversal of mood is not an arbitrary hypothesis, it follows inevitably from the structure of his model, the causal link being the excessive capital accumulated in prosperity. It will be evident from the cited references that his theory developed over time. Though substantially complete in 1910 the analysis of depression was refined in his later expositions. This makes it difficult to understand why his analysis of over-saving should have been over-stressed and his discussion of under-saving neglected.

Whilst it is undeniable that Keynes provided a more rigorously developed framework for the analysis of unemployment than Hobson did, it is nevertheless arguable that their

[1]See his *Confessions of an Economic Heretic*, London, 1938, Chapter 7.

basic explanations of the causes of unemployment in depression were remarkably similar. Each argued that full employment was impossible because it would involve a volume of savings in excess of what could be absorbed in private investment. For Keynes, sufficient investment was impossible because it would involve the "prospective profit falling below the standard set by the rate of interest."[1] Hobson arrived at the same answer with some emphasis on the imperfection of the capital market :

> " . . . in depressed times the few opportunities for profitable investment are kept in the hands of a knowledgeable group who prefer to find a profitable use for a limited amount of their own capital than to admit a flood of outside capital at a lower rate [of interest] . . . After the "break in prosperity" has passed into a long and deep collapse, the low interest testifies to the abundance of investment capital and bank credit available for any enterprise which can show the probability of working at a profit." [2]

Keynes' criticism of the "root of Hobson's mistake" seems to have been quite invalid.

The origin of this unwarranted criticism is doubtless to be found in their difference of approach to the problem. Hobson analysed the problem of unemployment directly in terms of the dynamic aspects of growth in a progressive economy. Keynes' analysis was primarily static in character, the static concepts being later used to provide a sketch of the cycle. Possibly, as a result of this static approach, he overlooked in his criticism of Hobson the feature he had noted himself, *viz.*, that the cause of the inadequate demand for new investment in depression was grounded in the events of the previous boom. Hobson did not overlook this important point. He may have seen the truth "obscurely and imperfectly" but he seems to have seen it more completely than Keynes realised.

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[1]*General Theory*, p. 370.
[2]*E.*, p. 410.