And this average is not merely of theoretical, but also of practical importance to capital, whose investment is calculated on the fluctuations and compensations [over the relevant period of time] (Marx, 1974, p. 190).

Finally I come to the suggestion in my paper that the long-run movement of this rate might be affected by monetary policy. Joan Robinson objects to my suggestion, but fails to state her grounds for doing so. In the absence of further clarification, it may perhaps be useful to make my suggestion more explicit, while illustrating some of its precedents. This I shall do by means of a few citations. The first comes from the *General Theory* where, after noting that the long-term money rate of interest is a 'highly conventional phenomenon', Keynes observes that

precisely because the convention is not rooted in secure knowledge, it will not be unduly resistant to a modest measure of persistence and consistency of purpose by the monetary authority (Keynes, 1936, pp. 203-4).

The second comes from Ricardo and refers to the consequences we should draw if Keynes is correct. Ricardo writes that to suppose that the bank can have the effect of 'permanently lowering the rate of interest' is also to suppose that 'by creating paper money, and lending it at three or two per cent under the present market rate of interest, the Bank would reduce the profits on trade in the same proportion' (Ricardo, 1951, vol. 3, p. 91).

Finally, as long ago as 1844 Thomas Tooke argued:

Suppose, then, that the reduced rate is general, and the loans for such length of time as to admit of being extensively acted upon by the different dealers of commodities ... [Then] the diminished cost of production hence arising would, by the competition of the producers, inevitably cause a fall of prices of all the articles into the cost of which the interest of money entered as an ingredient (Tooke, 1959, p. 81).

But in considering what Joan Robinson objects to in her comment of 1979 (Chapter 3), I have not only the comfort of Keynes and Sraffa's judgment (cf. Sraffa, 1960, p. 33), Ricardo's logic and Thomas Tooke's fact-finding ability. I also have the company of the Joan Robinson of 1971 who, in at least one passage, drew from Keynes the same conclusions that Ricardo would have drawn:

a fall in the rate of interest ... may have an important influence in stimulating house building and lowering future rents (Robinson, 1971, p. 31).

Indeed, what is a lowering of house rents if not a lowering of the rate of profits of the house-letting industry? And why should the house-letting industry be an exception in any respect, other than the conspicuousness of the phenomenon?[10]

[10] It should be stressed that – once the basis of the received notion of demand for capital (investment) has been found wanting – an ability of the monetary authorities to control the long-term rate of interest cannot be thought to imply their ability to bring the economy to, or keep it gravitating around, full employment of labour.

5

Keynes on the 'classical' theory of interest

Murray Milgate

I

Keynes's *General Theory* is once again at the centre of theoretical debate. A considerable proportion of the modern 'reconstructions' of Keynes's ideas take the form of the incorporation, in one way or another, of uncertainty into neoclassical general equilibrium models (accompanied by a variety of consequential behavioural hypotheses). These developments derive their credibility as 'Keynesian' analyses from conventional interpretations of the *General Theory* which assign a dual rôle to Keynes's emphasis on expectations and uncertainty. On the one hand Keynes's *positive* contribution is seen to consist of the formulation of a theory of the operation of a market economy in the face of uncertainty. On the other hand his *critique* of the various dimensions of what he called 'classical' theory is seen to consist of an attack on its alleged neglect of the influence of expectations and uncertainty. It follows, as a corollary of this second point, that if 'classical' theory were to be reconstructed by incorporating the effects of expectations and uncertainty then the reconstruction would represent (in some sense) an adequate, more general, 'classical' theory, which circumvents Keynes's criticisms. This is precisely the direction which current 'reconstructions' have taken.

The purpose of this note is to consider one particular aspect of this interpretation: to consider, that is, whether Keynes's *critique* of the 'classical' theory of the determination of the rate of interest is based on its neglect of the implications of uncertainty. This view finds apparent justification in the ambiguity of the critique of the 'classical' theory of interest launched in Book Four of the *General Theory*. It is there that Keynes appears to include the liquidity-preference theory of the rate of interest (based upon individuals' anticipations of an uncertain future) as part of his challenge to the orthodox

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doctrine. However, it will be argued here that, at least in so far as liquidity preference is concerned, Keynes did not himself regard that theory as part of his *criticism* of the 'classical' theory of interest. Instead his attack suggests a concern with problems of the orthodox theory of capital and interest which arise even in the absence of uncertainty.

Unfortunately, Keynes's position with respect to the criticism of the 'classical' theory of interest has been progressively obscured by conventional interpretations. There is, for example, a large group of writers who agree that the fourteenth chapter of the *General Theory* ('The classical theory of the rate of interest') (*JMK*, vol. 7)[1] is the platform upon which to build an interpretation of Keynes's criticisms of the 'classics', and that Keynes's critique should be sought in the theory of liquidity preference. This places liquidity-preference theory squarely in the *negative* or *critical* part of the *General Theory* (as distinguished from the positive or *constructive* part).[2] Against this view, however, may be set Keynes's subsequent arguments in his 'Alternative theories of the rate of interest' (*JMK*, vol. 14), which clearly assign the theory of liquidity preference to the *positive* part alone. There, Keynes poses once more the question which originally led him to liquidity-preference theory:

> *If* the rate of interest is not determined by saving and investment in the same way in which price is determined by supply and demand, *how* is it determined? (*JMK*, vol. 14, p. 212, italics added).

He goes on to state that it was in the course of providing the 'how' that he 'hit on ... the true explanation' – the theory of liquidity preference. This constructive task is quite distinct from the critical task of substantiating the conjectural 'if'.

Contemporary confusion is due in part to the fact that, in chapter 14, liquidity-preference theory is mixed in with the anti-'classical' arguments. But with the recent publication of the variorum drafts of the *General Theory* and the related Keynes-Harrod correspondence (*JMK*, vols 13 and 14), it is possible to view this chapter and its contents in a new perspective. This evidence suggests an interpretation that has a much closer affinity with Keynes's subsequent statements and casts doubt upon conventional interpretations of Keynes's attack.

The interpretations which fall into this latter class encompass a wide variety of models. Included are all those that might be called the 'special case' interpretations of the *General Theory*, which begin by assigning to liquidity-preference theory the rôle of critique of the 'classical' theory of interest (as, for example, in Professor Hicks's claim that 'it is the liquidity-preference doctrine which is vital', Hicks, 1937b, p. 133) and end by

[1] All references to Keynes's writings are to the appropriate volume and page number of the *Collected Writings* edition (hereafter abbreviated as *JMK*).

[2] This separation was maintained by Keynes and will be amplified in section II below.

concluding that this criticism does not make much impact on the 'classical' theory of interest, either because it only makes a difference 'to a number of short-cut conclusions' (Harrod, 1937, p. 238), or because the question of which of the *n* equations is dropped from the determination of general equilibrium prices (the demand and supply for 'loans' or the demand and supply for money) is 'purely a question of convenience' (Hicks, 1936, p. 246).[3] Included too is a very different variety of interpretation, which derives from Professor Hicks's review of the *General Theory* (Hicks, 1936). The interpretation is based on what Professor Hicks calls the 'method of expectations'; here the negative part of the *General Theory* is held to consist of the argument that 'classical' theory had ignored the fact that the forces of demand and supply might be kept at bay by uncertainty and expectations.[4] Liquidity-preference theory, in which anticipations are vital, is thus associated with the critique.

The one significant group of writers who may be excluded from these classes of interpretations are Keynes's immediate followers in Cambridge, who seem never to have inserted liquidity-preference theory into the negative or critical part of their subsequent descriptions and developments of the *General Theory* (see Joan Robinson, 1960, p. 148, and 1973, p. xi, p. xiv and ch. 8 *passim*; Kahn, 1954; Pasinetti, 1974, p. 47).

With the aid of the evidence provided in vols 13 and 14 of Keynes's *Collected Writings*, it is argued below that there is a clear implication that the theory of liquidity preference plays a rather different part in the *General Theory* than that which has sometimes mistakenly been assigned to it. To substantiate this claim, the evidence will be presented in the following way. In section II the draft version of chapter 14 is examined to show both how it was intended to fit into the schema of the *General Theory* and what criticisms of the 'classical' theory of interest were then offered. In the third section Harrod's reaction to the draft is considered. Harrod's reaction will be shown to have been a decisive factor in moulding the final version of the chapter when, in the last section, attention is focused on the published version, in order to highlight what might be called its 'hybrid' nature.

II

The successive tables of contents which Keynes began to propose for the *General Theory* in 1933[5] indicate that his vision was of a book that would be

[3] It might be noted that Keynes wrote to Hicks over a draft of this paper: 'I am not clear on what you mean by the "demand-and-supply for loans". Do you mean the demand and supply of loans *in terms of money*?' (*JMK*, vol. 14, p. 75, italics in original).

[4] The 'remedy', according to Professor Hicks, is to bring 'people's anticipations of the future' into the determination of a temporary equilibrium (Hicks, 1936, p. 240). But Professor Hicks expressed doubts on the theoretical viability of this approach (Hicks, 1936, p. 241). Moreover, there are other, broader, reasons why this interpretation of Keynes should be treated with caution (see Garegnani, Chapter 7 below, for a further discussion).

[5] The first surviving table of contents dates from December 1933 (see *JMK*, editorial comment, vol. 13, p. 421).

divided into two *mutually exclusive* parts. There was to be a positive part, consisting of the work on the relationship between saving and investment, the principle of effective demand and the multiplier analysis. And there was to be a negative part which would be concerned with the 'flaws' in 'classical' theory.[6] Into this schema, which crystallised in the draft of the *General Theory* that Keynes circulated privately in June 1935, liquidity-preference theory fitted unambiguously into the *positive* part and chapter 14, numbered as chapter 15 in the draft (see *JMK*, vol. 13, p. 526), fitted unambiguously into the *negative* part.[7] This separation is clear from the stylised way in which Keynes chose to structure his argument in the relevant chapters of the draft version. (In referring to the draft we shall adopt the convention of citing its chapters according to their number in the final text, attaching in square brackets their number in the table of contents of the privately circulated version.)

Chapter 13 [14], under the title 'The general theory of the rate of interest', opens as follows:

> To complete our theory ... we need to know what determines the rate of interest. In chapter 14 [15] and its Appendix [16] we shall consider the answers to this question which have been given hitherto ... What, then, is our own answer to this question? (*JMK*, vol. 7, pp. 165-6).[8]

This programme embodies the separation between the positive and negative parts. Already, therefore, one encounters a discrepancy between, on the one hand, the place of liquidity-preference theory in the proposed plan of this part of the *General Theory*, and, on the other, its place as portrayed in the type of interpretation mentioned earlier. Indeed in the draft version of the 'critical' chapter 14 [15], liquidity-preference theory is not mentioned at all.[9]

Although Keynes claimed in both draft and final text to have found it difficult to reconstruct the 'classical' theory of interest (see *JMK*, vol. 7, p. 175), it seems fairly clear that he saw it as a theory which embraced the following postulates. First, that the real rate of profit regulates the money rate of interest. Second, that variations in the rate of interest ensure the equilibrium of the demand and supply for capital (investment and saving). For chapter 14 [15] Keynes reserved the task (the negative task) of demonstrating why 'the notion that the rate of interest is the balancing factor which brings the demand for saving in the shape of new investment forthcoming at that rate of interest into equality with the supply of saving ... makes no sense' (*JMK*, vol. 14, p. 471).[9]

[6] In the correspondence on the drafts Keynes uses this characterisation of his work explicitly. He writes, for instance, of his 'criticism of the classical theory of the rate of interest *as distinguished from* my own theory' (*JMK*, vol. 13, p. 538, italics added), and elsewhere that 'I am still of the opinion that if my constructive sections are correct, my critical sections are more than justified' (*JMK*, vol. 13, pp. 547-8).

[7] This would seem to be further supported by Keynes's references to himself as 'the critic' in the draft of the chapter (see, e.g. *JMK*, vol. 14, p. 477).

[8] This part of the passage remained unchanged from draft to final text (cf. *JMK*, vol. 14, pp. 470-71).

Some useful additional clues about the intended target of Keynes's attack are provided by the passage from Marshall's *Principles* which Keynes chose to represent the 'classical' argument:

> Interest, being the price paid for the use of capital in any market, tends towards an equilibrium level such that the aggregate demand for capital in that market, at that rate of interest, is equal to the aggregate stock forthcoming at that rate (Marshall, 1961, p. 534; quoted in *JMK*, vol. 7, pp. 175-6).

This is a statement about long-period 'normal' interest. Indeed, Marshall indicates as much in the marginal summary which accompanies the passage (Marshall, 1961, p. 534).[10] The demands and supplies are for 'saving in general' or 'capital in its free form' or 'real capital' (Marshall, 1961, p. 533) and are expressed as quantities forthcoming per unit of time.[11] Although there is a moment in the draft of chapter 14 [15] when Keynes begins to tackle a rather different idea (that interest proper is a monetary phenomenon, not a real phenomenon),[12] in the main his criticisms are directed against the foregoing aspects of the 'classical' theory of interest.

In the draft chapter there are three main lines of attack (though, as will become apparent, the first two may be conveniently reduced to one). The first, which appears only in the draft, is expressed as follows:

> The analogy with the demand and supply for a commodity at a given price is a false analogy. For whereas it is perfectly easy to name a price at which the supply and the demand for a commodity would be unequal, it is impossible to name a rate of interest at which the amount of saving and the amount of investment could be unequal (*JMK*, vol. 14, p. 476).

The second, which appears in both draft and final text, is that:

> The traditional analysis is faulty because it has failed to isolate correctly the

[9] This is at the beginning of chapter 13 [14], where Keynes sets out his ground-plan for what is to follow. The same words appear in a slightly altered paragraph in the final text (*JMK*, vol. 7, p. 165). Keynes reiterates that this is, in fact, the proposition he intends to consider in chapter 14 [15] at the opening of that chapter, when he attempts to spell out what 'classical' theory had maintained (cf. *JMK*, vol. 7, p. 175). The final text differs little from the draft here (the changes are listed in *JMK*, vol. 14, p. 474).

[10] 'The rate of interest is determined *in the long run* by the two sets of forces of supply and demand respectively' (italics added). It is perhaps worth noting here that this was the theory of long-period interest (i.e. of the 'natural rate') to which Keynes had subscribed in the *Treatise* (see, for example, *JMK*, vol. 5, pp. 139, 142, 166, and 170-1). Furthermore, although Keynes does not state explicitly that chapter 14 [15] of the *General Theory* was an intended critique of his *Treatise* views, his references to the theory 'upon which we have all been brought up' (*JMK*, vol. 7, p. 175) lead one naturally back to the *Treatise*.

[11] Thus the 'classical' association between the 'demand and supply of capital' and 'investment and saving' (see Knight, 1915, pp. 301-2 and Eshag, 1963, p. 47).

[12] Keynes relegates this argument to the appendix in the final text (*JMK*, vol. 7, p. 186, n. 1).

> independent variables of the system. Saving and investment are the determinates of the system, not the determinants (*JMK*, vol. 7, p. 183).

These criticisms derive from a common position. They both stem from the belief that if the *positive* parts of the *General Theory* are valid (in this case the principle of effective demand) the other theories must, therefore, be invalid.[13]

The third line of attack is of a rather different nature, in that it is levelled against the internal logic of the 'classical' position. As far as the marginal productivity theory of interest was concerned, Keynes argued that

> an attempt to derive the rate of interest from the marginal efficiency [productivity[14]] of capital involves a logical error (*JMK*, vol. 14, p. 477),[15]

and this error arises because

> the 'marginal efficiency [productivity] of capital' partly depends on the scale of current investment, and we must already know the rate of interest before we can calculate what this scale will be (*JMK*, vol. 7, p. 184).[16]

Although this argument touches on the treatment of capital in 'classical' theory, the degree to which Keynes meant to emphasise the problems associated with this treatment is difficult to judge.[17] He does, however, extend his critique to the demand-and-supply approach of Marshall and of Walras, and once again the treatment of capital is called into question. Three uncharacteristically long footnotes attached to the discussion at this point in the draft concern (either wholly or partly) questions in the theory of capital (cf. *JMK*, vol. 7, p. 176, nn. 2 and 3; vol. 14, pp. 474-5). But Keynes never really specifies *why* the internal consistency of the 'classical' position turns on

[13] Recall Keynes's own statement of this point in the letter to Harrod quoted above, n. 6.

[14] Keynes insisted upon this association (cf. *JMK*, vol. 7, p. 137).

[15] A differently worded statement of the same point appears in the final text (*JMK*, vol. 7, p. 184.

[16] The passage appears in the draft and the final text.

[17] At one point in chapter 11 [12] Keynes does focus directly on these problems. He speaks there of the ambiguity as to 'whether we are concerned with ... one more *physical* unit of capital, or with ... one more *value* unit of capital' (*JMK*, vol. 7, p. 138, italics added). Keynes argues that the problem of the *physical* measure involves difficulties which are both 'insoluble and unnecessary'. The reasons for its insolubility are presumably the same as those which preclude the possibility of measuring aggregate output in physical terms, which Keynes had set out in chapter 4 (*JMK*, vol. 7, p. 38).

However, the reason which Keynes advances for the dependence of the *value* measure on the rate of interest misses the point of the problem of orthodox capital theory. Keynes argues that the problem is that the 'classics' had ignored the increment of value 'expected to obtain *over the whole life* of the additional capital asset; i.e. the distinction between Q_1 and the complete series $Q_1, Q_2, \dots Q_r$' (*JMK*, vol. 7, p. 138). They had instead concentrated their attention only on Q_1. 'Yet this cannot be legitimate except in a static theory, for which all the Q's are equal. The ordinary theory of distribution ... is only valid in a stationary state' (*JMK*, vol. 7, p. 139). But it is clear that this has nothing to do with the problems of traditional capital theory – for these apply (with the exception of one-commodity worlds) even to those versions of traditional theory built within a framework of static assumptions.

the treatment of capital – instead, after suggesting this possibility, he switches to other lines of attack (*JMK*, vol. 14, pp. 474-5).

Two points emerge from the criticisms contained in the draft of chapter 14 [15]. The first is that *liquidity-preference theory is nowhere mentioned in the draft of the chapter* and the second is that *the only criticisms directed at the internal logic of the 'classical' theory show a concern for issues which would today be identified with problems in the theory of capital*. The significance of these two points for any attempt to reconstruct Keynes's critique of the 'classical' theory of interest will become evident in section IV, after the extent of Harrod's influence on this part of the *General Theory* has been examined.

III

The Keynes-Harrod correspondence on the draft version of this chapter (*JMK*, vol. 13, pp. 526-65) indicates that Harrod was highly critical of its content. His criticisms fall broadly into two categories. At one level Harrod questions Keynes's tactics in his rôle as critic of the 'classical' theory of interest, and on another level he challenges Keynes's anti-'classical' arguments on points of substance.

In his biography of Keynes, Harrod remarks that he had objected to the chapter as it stood in draft, because he felt that it was 'pushing criticism too far', that it would 'make too much dust' and hence give rise to 'irrelevant controversies' (Harrod, 1972, p. 534). But it is only now, with the publication of both sides of this correspondence, that it is possible to see the full extent of the impact of Harrod's argument. On the tactical level, Harrod's disquiet over Keynes's attack on the 'classical' position is manifest again and again.

He wrote, for instance, that 'in your [Keynes's] critical part I think you have fallen into what I can only characterise as a confusion ... I feel it has made you quite unnecessarily critical of Marshall and others' (*JMK*, vol. 13., p. 530). And later, in another letter, that 'the effectiveness of your work ... is diminished if you try to eradicate very deep-rooted habits of thought *unnecessarily*. One of these is the supply and demand analysis' (*JMK*, vol. 13, p. 533, italics in original). In another letter Harrod refers to Keynes's criticism of the 'classics' on this point as 'guerilla skirmishing' (*JMK*, vol. 13, p. 534), and in still another Harrod claims that such criticism 'is not essential for your purpose' (*JMK*, vol. 13, p. 546).[18]

All manner of argument was used to try to dissuade Keynes from engaging in what Harrod saw as 'fussy, irrelevant, dubious, hair-splitting and hair-raising' (*JMK*, vol. 13, p. 556) criticism of the 'classical' theory of interest. One variety of argument re-appeared frequently; it was that if Keynes desired to have his positive part accepted he would do well not to make his critical part too harsh. For example, Harrod argued as follows:

> Suppose your reasons in the constructive and critical parts were equally good,

[18] See also the letter from Harrod, 6 August 1935 (*JMK*, vol. 13, p. 537), where the same point is made.

you would have a far greater chance of carrying conviction in the former because your adversaries had not had years of thought in which to prepare an answer (*JMK*, vol. 13, p. 536).

Harrod also argued that Keynes was doing a serious injustice to the younger generation in attacking the demand-and-supply theory of the rate of interest – 'doing great violence to their fundamental groundwork of thought' (*JMK*, vol. 13, p. 533). Yet another argument was that Keynes would not be able to substantiate his arguments against, for instance, Marshall, 'on the basis of short passages torn from their context' (*JMK*, vol. 13, p. 546).

By these polemics Keynes remained profoundly unimpressed,[19] but on the points of substance made by Harrod he tried to come to some accommodation.[20] There were, in the final analysis, only two substantive points. They were directed against the first and third lines of attack which had been adopted by Keynes in the draft of chapter 14 [15]. Against the first line of attack Harrod argued:

> This doctrine [demand-and-supply] makes perfectly good sense, but is open to the charge of being incorrect. I find no sense in saying that this doctrine makes no sense *because* in this case supply is always and necessarily equal to demand (*JMK*, vol. 13, p. 530, italics in original).[21]

And further, that

> the notion that price is determined by supply and demand always rests on a *cet. par.* assumption ... What you seem to me to have shown is that there are changes in other things which are so relevant and of such overpowering importance, that the old s. and d. analysis had better be put away (*JMK*, vol. 13, p. 531).

Harrod's argument here is clear; the existence of competing theories is not sufficient to demonstrate that one of the alternatives is logically unsound.

On Keynes's suggestion of a lack of internal consistency in the 'classical' theory itself, Harrod mixed tactical arguments with his substantive point. He wrote:

> to convict the classical economists of confusion or circularity within the limitations of their own premises ... is not essential for your purpose. And if not essential I should have thought it had much better be left out ... Such a

[19] Keynes replied to Harrod that his purpose in writing the *General Theory* was 'not in order to get read ... [but] in order to get understood' (*JMK*, vol. 13, p. 548) and that what was at stake in their dispute was a 'big question of substance, not of manners or controversial fairness' (*JMK*, vol. 13, p. 547).

[20] This was no doubt due to the clarity of Harrod's précis of the positive structure of the *General Theory* (*JMK*, vol. 13, p. 553; see also Keynes's reply, p. 557).

[21] To this Harrod adds a tactical point: 'in order to give you pause for thought, I should like to add that this was the most criticised part of your address in Oxford ... Frankly it convinced no one' (*JMK*, vol. 13, p. 531).

> criticism is bound to seem unfair and I believe it is unfair (*JMK*, vol. 13, p. 546, italics omitted).

In retrospect, this belief is revealed to be unfounded. Keynes had attempted to portray the internal problems of the 'classical' theory of interest as part of the more general problem of orthodox capital theory, and, remarkably, recent work in this field has revealed these problems to be of a far more serious and fundamental character than Keynes (or Harrod) then realised.

Nevertheless, Harrod was led to conclude that it was both possible and desirable to provide a 'reconciliation' of the two theories (cf. Harrod, 1972, p. 534).

> I feel that the only way I could possibly be of any assistance is not in the elaboration of your own view, but in endeavouring to restrain you in your criticisms (*JMK*, vol. 13, p. 536).[22]

In this rôle, judging from the change in emphasis Chapter 14 [15] underwent before it reached the printer, Harrod seems to have succeeded only in clouding the issues.

IV

Almost 60 per cent of the published text of chapter 14 had not appeared in the draft version. The added section runs from p. 177, line 32, to p. 183, line 28, in the final text of the *General Theory*.

Harrod's letter of 30 August 1935 contains the following attempted reconciliation of the 'classical' theory of interest with Keynes's theory:

> generally when you draw a supply curve $x = f(y)$, it is assumed that you are treating x as a function of a single variable, price, and other things including income were equal. That is the classical supply curve. To relate the classical supply curve to yours, you would have to draw a family of classical supply curves corresponding to different levels of income and to show that the value of each corresponding to a given rate of interest was identical with that of the demand curve (*JMK*, vol. 13, p. 555).

To this passage of the letter Harrod appends the following note:

> Let y_1, y_2 etc. be rates of interest and Y_1, Y_2, etc. incomes corresponding to them (Y_1 being derived from y_1 via marginal efficiency of cap. and the multiplier). For each value of Y draw classical supply curves, of which each curve shows the amount of saving corresponding to various values of y at a given level of Y. Then according to you it will be found that the value of y at which the curve appropriate to income Y_r intersects the demand curve is in fact y_r, where y_r represents any given rate of interest whatever (*JMK*, vol. 13, pp. 556-7, italics omitted).

This construct was adopted by Keynes (as a 'very useful ... help to ex-

[22] The same idea is echoed in Harrod (1972), p. 534.

position') in his reply to Harrod of 10 September 1935 (*JMK*, vol. 13, p. 557), and it appears on p. 180 of chapter 14 of the final text of the *General Theory*, where it forms the basis of the six pages of argument that Keynes added during revision. Not surprisingly, a rather new and different thread is thereby woven into the anti-'classical' arguments of the draft. It is this thread which is in large measure the source of the confusion described in section I above.

Gone completely is Keynes's criticism based on the first line of attack which was set out in section II above.[23] More significantly, the criticisms concerning the internal logic of the 'classical' position are considerably watered down. In particular, those which touched on 'capital theory' are much reduced (cf. *JMK*, vol. 14, pp. 476-8 for the changes). Moreover, the adoption of Harrod's reconciliation makes way for the belief that if the level of income were constant then the 'classical' theory of interest would be sound. But more important still is the fact that liquidity-preference theory is now mentioned explicitly in the negative or critical part of the *General Theory* (*JMK*, vol. 7, pp. 180 and 181).

The combined effect of these changes opened the door for the variety of interpretations summarised in section I above. But it has been shown that these interpretations are at odds with the draft of this part of the *General Theory*. They imply that Keynes introduced liquidity-preference theory to show, in some sense, where the traditional theory had gone wrong, whereas, on the contrary, Keynes introduced it to explain the rate of interest. Why the 'classical' theory was false was, for Keynes, an entirely separate question.

Upon which version then should attempts to reconstruct Keynes's critique of the 'classical' theory of interest be based? The evidence seems weighted against an unqualified acceptance of the final text of chapter 14 for the following reasons.

Firstly, although revision wrought important changes in the final content of chapter 14, it was accompanied by no parallel alteration in the ground-plan which Keynes had set out in the preceding chapter, which assigned liquidity-preference theory to the positive rather than the negative part of the work. All the passages cited in section II which established this fact appear in the final text. Furthermore, there is no evidence that Keynes had changed his mind about them.

Secondly, even after the publication of the *General Theory*, Keynes again emphasised that liquidity-preference theory was designed as an alternative theory of the rate of interest and that it therefore fell into the positive part of his work. Moreover, a lack of zealous attachment to his theory (see *JMK*, vol. 14, pp. 111, 213, 215) indicates that it was not Keynes's conviction that if liquidity-preference theory was wrong, then the 'classical' theory would be right.

[23] The previously cited statement of the first line of attack is replaced by Keynes's version of Harrod's reconciliation.

Finally, it does not seem that Keynes deflated his one line of attack directed towards the internal logic of the 'classical' theory because he thought it to be unfair, but rather, as Harrod put it, because it was bound to seem unfair.

It may be concluded that, although Keynes was clearly convinced of the necessity of complementing his positive contribution with a logical critique of the 'classical' theory, and he believed that the logical flaws were to be found in the 'classical' theory of capital and interest, the limited scope of his undeveloped criticisms led him to accommodate Harrod's reconciliation so that he might not 'seem unfair'. However, recent debates in the theory of capital have shown Keynes's initial intuition to be well founded. The deficiencies of the neoclassical theory of employment are synonymous with the logical deficiencies of the neoclassical theory of capital. These problems are quite different from the difficulties encountered when attempting to deal with expectations and uncertainty. Indeed, these forces can be incorporated within the orthodox framework, though not without some difficulty and circumlocution.

In adopting Harrod's reconciliation Keynes sacrificed his negative argument on the altar of the immediate success of the positive theory. This has had the unfortunate consequence of appearing to lend support to interpretations of the *General Theory* which distort both the positive and negative parts of Keynes's contribution to the theory of interest.

Postscript: Some comments on the marginal efficiency of capital and liquidity-preference theory

As the preceding note is mentioned in the discussion between Garegnani and Robinson (Chapters 3 and 4 above), some further comments on this particular aspect of that exchange may not be out of place. I will confine myself to a consideration of the connections between the arguments advanced in my own note and the more broadly based conclusions drawn by Garegnani; for here Robinson (p. 70 above) suggests that there is a contradiction between my position and that of Garegnani and so, it seems, does Garegnani (p. 73, n. 1). I will not touch on the issue which seems to me to be at the centre of the Garegnani-Robinson discussion – the validity of the use of long-period 'normal' conditions in theories of value, distribution and employment.

Garegnani argues, in my view correctly, that the adoption of the 'marginal efficiency of capital' as the basis of a theory of investment is equivalent to adopting an orthodox marginalist theory of investment (pp. 22 and 59).[24] He argues that the notion of an interest-elastic investment demand function (the marginal efficiency of capital schedule) is founded upon the conception of a demand schedule for 'free capital' elastic with respect to changes in the

[24] Indeed, Keynes seems to have transplanted the essentials of it from his earlier (orthodox) *Treatise on Money* (see *JMK*, vol. 5, p. 138).

rate of interest (pp. 22 and 64). Both notions are revealed to be inadequate when confronted with reswitching and reverse capital-deepening (p. 39) because these phenomena discredit the notion of a negatively-sloped demand function for 'free capital' and hence the orthodox position with respect to the demand for investment.

Garegnani goes on to indicate that the same (untenable) theoretical position is also at the base of the marginalist school's claim that there exists a long-run 'tendency' towards full employment, (pp. 37-9). I would not wish to dispute any of these arguments. In fact, I was making precisely the same point concerning the connection between the marginalist theories of capital and employment when I wrote in my own note that 'the deficiencies of the neoclassical theory of employment are synonymous with the logical deficiencies of the neoclassical theory of capital' (p. 89 above).

Garegnani proceeds from these results to argue that the positive contribution of the *General Theory* (the principle of effective demand) may be viewed as a *long-period* theory of employment (pp. 21 and 58 above) – a demonstration that the system 'oscillates', as Keynes put it, 'round an intermediate position appreciably below full employment ... determined by "natural" tendencies, namely, by those tendencies which are likely to persist' (*JMK*, vol. 7, p. 254). The possession of this positive theory does not, however, relieve us of our obligation to provide satisfactory arguments for scrapping (by demonstrating an internal inconsistency) the orthodox marginalist theory with which it competes.[25] Thus we arrive at one of Garegnani's fundamental conclusions: Keynes's positive contribution to the theory of employment may be supplemented by invoking the problems of the marginalist theory of capital to complete the negative task (pp. 22-3 above). Here again, the arguments in my own note do not conflict with those of Garegnani; for it was argued there as well that this is the appropriate way of completing the negative task (see especially pp. 84 and 88-9 above).

Garegnani also examines the reasons which explain the absence of a climate of opinion favouring the above course of action (he refers to a degree of 'theoretical uncertainty', p. 21) and why, on the contrary, it has been possible to offer an interpretation of Keynes which amounts to a virtual reaffirmation of the orthodox marginalist theory of the long-run connection between saving and investment. The reasons, as I understand them, are twofold: first, Keynes's adoption of the notion of the marginal efficiency of capital (p. 54 above) and secondly, Keynes's unfortunate reliance on liquidity-preference theory as a *critique* of the conventional wisdom (p. 73). In conjunction, these factors have been responsible for the reassertion of the older orthodoxy by lending support to the argument that an 'inflexibility' in the rate of interest (a 'friction' arising from the presence of uncertainty and expectations) is *all* that prevents the demand for investment and the supply

[25] Confining myself to a discussion of the theory of interest, this is exactly what I had argued (pp. 82 and 86 above). From a wider perspective Garegnani makes the same point (p. 59 above).

of saving from being equated in the traditional fashion at full employment (Garegnani cites Modigliani, 1944b, as having produced just such an interpretation). According to these interpretations, Keynes's theory is relegated to a consideration of that class of circumstances where certain frictions or rigidities prevent the systematic forces outlined by marginalist theory from producing the results that they ultimately have a tendency to produce.

In rejecting such syntheses Garegnani argues (a) that the long-period notion of an 'unemployment equilibrium' is incompatible with the adoption of the marginal efficiency of capital and (b) that the 'ultimate tendencies' of marginalist theory are themselves derived from an internally deficient theory of distribution.[26] In my note, I had to be content to reject the neoclassical synthesis on the grounds that once the negative role of liquidity-preference had been replaced by what we have since learnt about neoclassical capital theory, the rest would follow.

The upshot of Garegnani's argument in Chapter 2 seems therefore to be that we must abandon the marginal efficiency of capital and that if we wish to avail ourselves of an effective criticism of the marginalist theory of interest we should not look to liquidity-preference theory to provide it. In my own note I argued (from a perspective much narrower in scope than that taken by Garegnani) that not only was the second point important but that, once taken, it would be possible to muster an argument to show that it was not a course beyond the 'spirit' of Keynes's own intention.[27] I cannot help but feel that on these points there is nothing in my note which opposes anything that Garegnani has had to say.

On p. 73 n. 1 of Garegnani's 'Reply' (Chapter 4) he seems to me to invent a contradiction between my own position and his when he states that I had suggested that 'Keynes had a criticism [against the orthodox theory of interest] founded on the deficiency of the underlying concept of capital'. I take this to mean that Garegnani feels that I had argued with Keynes actually hit upon reswitching and reverse capital-deepening.[28] Now if this were true then Garegnani would be correct in inferring from it that I held that uncertainty and expectations via their role in liquidity-preference theory were not actually used by Keynes in a criticism of the orthodox theory of saving and investment and so he would be right in seeing a contradiction between my

[26] Thus Garegnani argues that 'one may wonder ... how acceptable these determinations [of the volume of investment] are and, above all, how consistent they are with other parts of Keynes's theory, as soon as problems which are not strictly confined to the short period have to be confronted' (p. 59 above).

[27] This is not the same as saying that such a course of action does not deviate from the *content* of Keynes's eventual position. My whole purpose was to question the orthodox use of the content of Chapter 14 as the basis for interpreting the *General Theory*.

[28] The way in which Garegnani examines the evidence produced on p. 84 above appears to indicate this. Garegnani is not convinced (and justifiably so) that this evidence shows Keynes to have been in possession of a critique of the concept of capital as a factor of production. But that evidence was not offered in support of such a strong contention – it shows only that Keynes had a general, yet vague (and, as we can now see, misdirected) idea that something *might* be wrong with the orthodox theory of capital.

position and his own. But this is *not* what I meant to convey.[29]

My argument was that Keynes 'was convinced of the necessity of complementing his positive contribution with a logical critique of the "classical" theory' (p. 89 above) and that in the *early stages* Keynes showed a concern 'for issues which would today be identified with problems in the theory of capital' (p. 85 above, italics omitted). However, 'Keynes never really specifies *why* the internal consistency of the "classical" position turns on its treatment of capital'[30] and, in fact, 'the limited scope of his undeveloped criticism' led him to have recourse to liquidity-preference (p. 89 above). How little Keynes was aware of the 'serious and fundamental character' of the problems of the orthodox theory of capital that have been exposed more recently is shown, I believe, by his using liquidity preference in this way (and, as Garegnani says, the presence of the marginal efficiency of capital only testifies further to this[31]). The inference I drew from this was that if we developed Keynes's 'initial intuition' by completing the negative task with the full-scale critique of the marginalist conception of capital (rather than using liquidity preference as is done in chapter 14 of the *General Theory*) we would have availed ourselves of a criticism of the conventional wisdom that was quite independent of the presence of uncertainty and expectations. It seems to me that this is to reach, by a slightly different route, one of Garegnani's own conclusions (p. 22 and 73-4 above).[32]

[29] In the introduction to my note, when speaking of Keynes's criticism of the traditional theory of interest I wrote, 'Keynes *appears* to include liquidity preference ... as part of his challenge to the orthodox doctrine' (p. 79 above). This may have been an injudicious choice of words, because I say almost immediately afterwards, 'in chapter 14 liquidity preference *is* mixed in with the anti-'classical' arguments' (p. 80 above).

[30] 'The degree to which Keynes meant to emphasise the problems associated with this treatment is difficult to judge' (p. 84 above; see also the footnote that accompanies this statement).

[31] I would not want to go as far as Garegnani does in arguing that this 'general awareness' on Keynes's part owes its origin to the same considerations that motivated Knight and others at that time to dwell upon traditional capital theory. For Keynes saw the issues from a vantage point not enjoyed by his contemporaries – he had an alternative theory. The others, almost to a man, were content to grapple with these questions within the framework of demand and supply.

[32] In my note I chose to examine the implications of the 'hybrid' nature of just one chapter of the *General Theory* prompted by some interesting facts concerning the construction of this chapter contained in *JMK*, vol. 13. In his analysis, Garegnani focusses upon the implications of the 'heterogeneous strands of thought' the *whole book* contains. In aims and conclusions they differ only in the usual way that an analysis limited in scope differs from a more broadly based one – Garegnani goes far beyond the issues which could legitimately have been discussed by me.