

Keynes's Lectures, 1932-1935: Notes of a Representative Student
A Prelude: Notes for the Easter Term 1932*

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Introduction

I am preparing a synthetic set of Keynes's lectures at Cambridge of the years 1932 to the year of the publication of **The General Theory**. The notes are based on those taken by his students and range all the way from Lorie Tarshis's comprehensive notes for the four years to those taken by a physics student Marvin Fallgatter in 1933. The problems involved in constructing a synthetic set of Keynes's lectures based on these notes are many and complex. Some idea of the problems, which will be fully documented later,¹ can be seen from what might be called a pilot study.

Keynes's 1931 Michaelmas Term lectures were postponed until the Easter Term 1932. We have fragments of his own notes for the first two lectures² and an important `manifesto' from Richard Kahn and Joan and Austin Robinson³ about the second lecture which generated considerably discussion. I intend in this paper to use these notes, the `manifesto' and the discussion which resulted as illustrations of the content, and difficulties with the interpretation, of Keynes's lectures. It will be remembered that his thoughts were developing rapidly during this period so that the observations which can be made about the Eastern Term 1932 lectures do not always apply to the subsequent ones. The presence of three members of the `Circus' at Keynes's lectures and their written observations on the second should add particularly to our knowledge of the problems which students had in the interpretation of what Keynes had to say. I do not, in this paper, refer to any of the discussions Keynes had with Robertson.

Keynes' lectures in Easter were entitled `The Pure Theory of Money'. Keynes had discussions about them with Dennis Robertson and Richard Kahn [CW, XIII, 294-301, not 244 as stated later on 376; CW, XXIX, 39]. He reported to Lydia that, at his first lecture of 25 April, "Richard Kahn, Piero Sraffa and Joan Robinson were there to `spy' on him." [CW, XXIX, 35].

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First Lecture: 25 April, 1932

The typed and handwritten fragments upon which Keynes appears to have relied for the first lecture, published [CW, XXIX, 35-38] as "Notes on Fundamental Terminology," are concerned with the general problem of precise expression of concepts in economics. In all lectures (and writings), Keynes argued, the speaker must employ general constructs which appeal to listeners' intuitions, having assured himself that the great majority of real life examples fit the constructs being discussed. Unsympathetic listeners, unable or unwilling to follow the main lines of persuasion and argument, will `niggle'. The speaker must devote some time to allaying the criticisms of unsympathetic and unfriendly critics but to attempt to forestall **all** quibbles would be an impossibly "...prolix and pedantic..." task [CW, XXIX, 36].

Confronted with such an introduction, the sympathetic members of the lecturer's audience no doubt experience impatience and a desire for the lecturer to set out the argument so that they can tell themselves whether or not the constructs hang together. The unsympathetic will be dissatisfied, will believe their criticisms are not `niggles and quibbles' and will believe the speaker to be either weak or wily, unwilling to entertain criticisms for fear his whole line of thought being advanced, the whole edifice, will come tumbling down. An impasse ensues!

The impasse appears to be inevitable. If it is true, as Keynes said at the start of Easter Term, that [CW, XXIX, 37-38]

... theoretical economics often has a formal appearance where the reality is not strictly formal. It is not, and is not meant to be, logically watertight in the sense in which mathematics is. It is a generalization which lacks precise statement of the cases to which the generalization applies

then the economist must use a formal logic, a mathematical system and matching empirical or quantitative constructs which are as open as is the economic theory. To aver, for example, that something (some variable, some measure) either does or does not belong to some class is to imply that Keynes's principle of the validity of imprecise generalization is wrong. Nor is the matter just one of situational precision, i.e., for purposes of this argument, one need be only so precise, for purposes of that, so much more precise; or, in empirical study, one can measure things precisely up to the point where the costs of additional precision are not recouped by the additional benefits--a view which sees data preparation and use as itself an exercise in constrained optimization.

The difficulty runs deeper. As Keynes argued [CW, XXIX, 38], "Those writers who try to be strictly formal generally have no substance." The need for a logic or symbolic representation which matches the open-endedness, as Keynes saw it, of economic theory means that the audience must follow and understand the logical and philosophical foundations of the speaker's epistemics.⁴ It is not sufficient, therefore, that a listener or reader have `good will' - as Keynes complained Hayek lacked [CW, XIII, 243] something more, a philosophical appreciation, is required. If not, if a

closed logic is applied to the speaker's theoretical constructs, then not only will the chances for misinterpretation abound but listeners or readers will depart convinced that the speaker is not a rigorous economic theorist and, in Keynes's case, it seems but a step to argue that he was not really interested in precise, exact and beautiful economic theory but was more concerned with the allegedly more inexact and epiphenomenal practicalities of economic policy.⁵

Before considering Keynes's second lecture I should note that in the published, typed, and handwritten fragments [CW, XXIX, pp. 35ff], the material of the lecture notes included in early drafts of **The General Theory** was broken off and a section, subsequently crossed out, appears in the draft, which deals with (i) the definition, E , of the gross receipts of entrepreneurs or the money value of the sales proceeds of the community's current output, O , of goods and services and (ii) the breakdown of the value of output into three components of costs: the entrepreneurs' (1) prime or **variable** costs of production, (2) fixed costs, and (3) profits such that in each line of activity, entrepreneurs should have the **expectation** of gross receipts from the disposal of output being at least not less than prime or variable costs, the precise definition of which, Keynes was prepared to leave to those who made more detailed inquiries into the concepts of cost [CW, XXIX, 37, emphasis only on `variable', in the original].

Second Lecture: 2 May, 1932

From the published notes and fragments [CW, XXIX, 39] for the second lecture, with which Keynes was dissatisfied [CW, XXIX, 38], he would have appeared to lecture on two essential points. There was, however, some confusion in the notation. Keynes's truism

$$Q + E = I + F$$

such that the value of incomes, Q profits or quasi-rents inclusive of fixed costs and E prime or variable costs, will be identical to the value of output, I investment outlays and F consumption expenditure, is straightforward. In the notes and in the subsequent discussion which took place, however, particularly when a disaggregated analysis was attempted and expectations were being discussed, some ambiguities emerge. In particular, we have seen that E' stands for the gross receipts of entrepreneurs (or the money value or sales proceeds) which they **expect** to receive from the sale of the current output. Keynes's notation reflects partly his struggle to shed the skins of the **Treatise** and one must try to make sense of the argument as best one can - as will be necessary when we consider the `manifesto'.

Keynes argued first that " ΔO and $\Delta E'$ are never of opposite signs and that $\Delta E' - \Delta F$ and $\Delta E'$ are never of the opposite signs" [CW, XXIX, 39]. Thus, Keynes was arguing that output and the gross receipts of entrepreneurs would move together and, since changes in investment are equal to changes in gross receipts of entrepreneurs, or Income, less changes in the volume of consumption expenditures, $\Delta I = \Delta E' - \Delta F$, and arguing that the

sign of the differences between E' and F would be the same as differences in E' , it follows that changes in investment, output and employment would all be positively correlated.⁶

Keynes argued his case in terms of the implausibility of an exception. Suppose entrepreneurs increased investment. If there were a coincident rise in earnings (e.g., a **rise** in money wage rates) such that nominal income rises in two ways: an increase in earnings at the old levels of output and employment plus the increase in earnings associated with the 'increase' in the level of employment) by an amount such that the increase in savings would exceed the increase in investment, then the increase in investment would be so highly unprofitable that the increase in employment and output would not be taking place but there would, rather, be a reduction in employment and output. Keynes rejected this possibility and argued

Thus we are left with the remarkable generalization that, in all ordinary circumstances, the volume of employment depends on the amount of investment, and that anything which increases or decreases the latter will increase or decrease the former. [CW, XXIX, 40]

In his desire to be most general⁷ Keynes went even further. He gave a "...**further** example of the practical utility" of the concepts he was setting out.⁸ Consider again the truism $Q = I + F - E$. Keynes says:

Since **cet. par.** I and E are both likely to fall with Q , and F to fall with $E + Q$, it follows that any given position of Q [output] is one of unstable equilibrium, in the sense that any movement away from Q in either direction will tend to aggravate itself by stimulating a further movement in the same direction, until a point is reached where the fall in E is sufficiently in excess of the fall in F to offset the fall in I (and similarly **mut. mut.** with an upward movement. [CW, XXIX, 40])

If the truism is rewritten as

$$Q + E(Q) = I(Q) + F(Q + E(Q))$$

and one considers an autonomous change in the level of investment, δ , because of a change in 'animal spirits', then in a standard way one has

$$dQ = \frac{\delta}{(1 - F')(1 + E'(Q)) - I'(Q)}$$

where $F' = F'(Q + E(Q))$ is greater than zero as are $E'(Q)$ and $I'(Q)$, then an autonomous increase (decrease) in the volume of investment is associated with an increase (decrease) in the flow of quasi-rents if the denominator is positive. Thus, in his drive towards generalization in this lecture Keynes developed the idea that investment and profits (and employment) were positively correlated so that investment could be taken as a positive function of quasi-rents and quasi-rents and employment could be considered as well a different function, because of the spending propensities, of investment. Small wonder he believed

...that any man who has thoroughly grasped the truism

$$\Delta Q = \Delta I + \Delta F - \Delta E$$

and has allowed this colourless and in itself inoperative liquid to enter his marrowbones, will never be, in his outlook on the practical world, quite the same man again! [CW, XXIX, 40-41]⁹

If the relationships between prime costs and investment and quasi-rents are ignored, then the relationships between quasi-rents (and income, output and employment) and investment

$$dQ = \frac{\delta}{1 - F'}$$

is, of course, the basic Kahn multiplier.

Once again, it is clear that difficulties abound in this magisterial conception.¹⁰ Indeed Keynes's further discussion is none too clear [CW, XXIX, 41-42] but more importantly, this second lecture was followed by a 'manifesto' from Joan and Austin Robinson and Richard Kahn in May 1932.¹¹ The 'manifesto' was not concerned with the common sense of Keynes's main argument as with the method of formal logic Keynes pursued.¹² That method was said to hedge Keynes's argument around "...with restrictions which detract unnecessarily from generality without increasing its plausibility" [CW, XXIX, 42].

It will be remembered that in the second lecture Keynes argued that $\Delta E'$ and ΔO , called condition (a) in the 'manifesto', would have the same sign, and that $\Delta E' - \Delta F$ and $\Delta E'$ would have the same sign, called condition (b), and that, since $\Delta I = \Delta E' - \Delta F$, changes in the volume of investment, output and employment would all be positively correlated, i.e., ΔI and ΔO would have the same sign.

The first objection is connected with $\Delta E' - \Delta F$ having the same sign as $\Delta E'$. If expenditures on consumption increase more rapidly than "income" [and Keynes immediately suggests a confusion in the 'manifesto' between income and earnings, i.e., prime costs] so that $\Delta E' - \Delta F$ and $\Delta E'$ do not have the same sign, then surely, Keynes listeners say, the proposition that investment and output move together is actually strengthened.

The fact of the matter is that condition (b) is necessary, not to show that I and O move together but to ensure that there shall be stable equilibrium. If expenditure were to increase by more than income, equilibrium would be unstable and any small increment in investment would cause output to rise either to infinity or to the point where condition (b) [$\Delta E' - \Delta F$ and $\Delta E'$ have the same sign] came into operation, whichever happened first. [CW, XXIX, 43]

Here the manifesto would appear to establish the stability conditions for Keynes's discussion. In our formalism, if there exists a local set of compatible levels of investment and quasi-rents such that $(1 - F')[1 + E'(Q)]$

- $I'(Q)$ is less than zero these levels of investment and quasi-rents would be unstable. If there were not compatible levels of investment and quasi-rents where $(1 - F') [1 + E'(Q)] - I'(Q)$ ceased to be negative or equal to zero then the postulated relationships between investment and quasi-rents are without meaning.

The stability conditions were part of the enormous discussion about the multiplier, stemming from the widow's cruse of the **Treatise** and the vexed question about the extent of the secondary employment associated with public works and the confusion between where the savings necessary for the increase in the public works comes from and how increased public works are to be financed. The stability conditions give precise limitations to the consequential change in quasi-rents (or profits),¹³ to the extent of secondary employment and the source of the savings.¹⁴

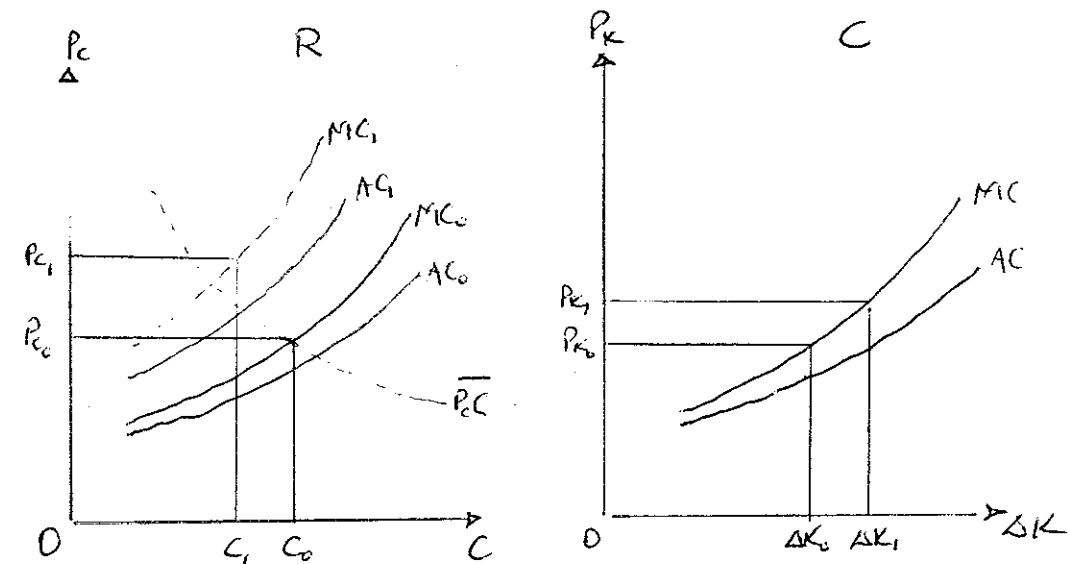
It is not necessary to recount the emergence of the 'multiplier', complex as that component of the history of economic thought is.¹⁵ Rather the question here is the effect of the 'manifesto' on Keynes's search for greater generality. One 'misinterpretation' Keynes already noted. His listeners argued as if expenditures on consumption could increase more rapidly than income. Assume a stable relation between investment and income is being considered. If by income one means earnings, i.e., prime costs, then clearly consumption expenditures can rise more rapidly than earnings. If all earnings are consumed they rise together. If some earnings are saved, then clearly as earnings increase, consumption out of earnings can increase more rapidly, but then quasi-rents must be rising more rapidly than earnings unless these are increased savings out of quasi-rents in which case incomes (i.e., earnings and quasi-rents) would not be rising less rapidly than all consumption expenditures.

The matter to which Keynes was devoting his attention in the second lecture of the Easter Term 1932 was beyond the multiplier.¹⁶ Assume there are stability conditions associated with the situation in which, within a short period of time, it would be possible for entrepreneurs to **revise** investment expenditure decisions on the basis of what was happening to quasi-rents or profits in **the same period** of time. The problem of specifying changes in expectation within a period of time which were nonetheless equilibrating changes vexes all multiplier-relation analysis and is no doubt one of the reasons why so much of Keynes's subsequent analysis is written in terms of a given level (or change in the level) of investment being carried out by entrepreneurs. If one postulates a change in the level of investment, arising from an increase animal spirits, then it is possible to imagine that the revised state of expectations of entrepreneurs in the capital and consumption goods industries is consistent with the greater flow of gross receipts of the entrepreneurs when the level of output and employment in these industries are greater.¹⁷

To go further, however, and argue that the higher levels of quasi-rents or profits in the two industries would cause entrepreneurs to undertake **even higher levels of investment** is to argue that short-term expectations are being revised **within the period** of analysis and, not only that, are being revised in such a manner that the outcome of events within the period, including induced investment, is consistent with the revised expect-

tations. To formulate revisions of expectations by entrepreneurs, such revisions nonetheless leading to equilibrium levels of investment and profits in the Keynesian short period, is clearly a tall order.

The manifesto, however, focused more on the possible exception to Keynes's argument. As we showed Keynes himself countenanced an exception. The manifesto argues firstly that "...if it **were** the case that an increase in output was accompanied by a very great fall in prices, the presumption in favour of the proposition that I and O move together would surely once again be increased, not diminished" [CW, XXIX, 43] which as Keynes noted is by no means clear, if not fallacious. The 'manifesto' then goes on to argue more fully, that a given increase in E' may be accompanied by so large an increase in prime or variable costs, that output O , (and profits) decline. The point being made in the 'manifesto' was **not** necessarily that made by Keynes in the lecture and may be seen by use of the following diagram.



The left-hand side deals with a Marshallian firm in the production of consumption goods (called R goods in the 'manifesto') while the right-hand side pertains to the capital goods industry (called C goods in the 'manifesto'). If the increase in investment [$P_{K_1} \Delta K_1 - P_{K_0} \Delta K_0$] results in a sufficient increase in demand, not only a higher price but as well an increase in the costs of production facing the entrepreneur in the consumption goods sector such that the new equilibrium, $P_{C_1} C_1$, entailing a higher outlay on consumption goods, then it is possible that the decline in the **output** of consumption goods could, in terms of effects on the volume of employment,¹⁸ more than offset the increase in the output of capital goods. There would be sharp cases. If the elasticity of supply in the capital goods industries was virtually nil, any increase in investment would be then wholly reflected in a rise in the price of new capital goods. If there were no resulting increases in the demand for consumption goods but costs of pro-

duction were increased in the consumption good industries, then their output, and hence aggregate output and employment, would fall. The 'manifesto' claimed that the case of no increase in the demand for consumption goods was the one exceptional case Keynes had dealt with in the lecture. It is, if true, an obviously special case. If there were some increase in the demand for consumption goods accompanying an increase in the demand for capital goods and supply conditions in the consumption goods industries **did** not change, then an unambiguous increase in output and employment would take place.¹⁹

The 'manifesto' was not emphasizing the major point connected with Keynes's exception. It will be noticed that, in the diagram, the flow of quasi-rents in the consumption goods industries could be lower while that in the capital goods industries would be higher. It is possible for the total flow of quasi-rents to be reduced.²⁰ If the demand for investment goods is taken to be a function of the flow of quasi-rents, then it would seem to be the case that one could no longer take the increase in investment as given. While it would appear that the 'manifesto' confirms Keynes's stability analysis, the exception - i.e., the possibility of declines in output and employment associated with a given increase in investment - really did not come to grips with the exceptions to the insight of Keynes about the positive correlations between investment and quasi-rents.

Keynes replied to the 'manifesto' [CW, XXIX, 46-47] by pointing out initially that the exceptional case mentioned in the 'manifesto' infringed Keynes's first condition, namely that expected receipts of entrepreneurs and output move together. From the diagram, it can be seen that the increase in prime costs in the consumption goods industries could exceed the increase in the gross receipts of the entrepreneurs (Keynes designates this as $\Delta E > \Delta E'$). Then, quasi-rents must be lower, i.e., $\Delta E'$ and ΔQ are of opposite sign and since ΔQ and ΔO are of the same sign then $\Delta E'$ and ΔO are of opposite signs which infringes the first condition. Keynes notes that he is assuming that the elasticities of supply in the two industries are the same.²¹ If there are increases in the costs of production in the capital goods industries similar to those postulated in the consumption good industries, then, of course, it is being postulated that costs of production are rising more rapidly than demand in both industries and that will be associated with a fall in quasi-rents and output in both industries.

The crucial question is, however, why should such increases in the costs of production be associated with the postulated improvement in 'animal spirits'. In his reply to the 'manifesto' Keynes also sets out an act of investment by a collective or household [called the University of Cambridge] which not only cuts its current consumption to finance the building of a laboratory but attempts further economies now to provide a fund for the maintenance of the laboratory. Then, says Keynes, the increase in investment is associated with such a **decrease** in total consumption expenditures that ΔI and $\Delta I + \Delta F$ are of opposite signs. Since, in this case, the decrease in total receipts of entrepreneurs and incomes is less than the decrease in consumption expenditures, i.e., there is an increase in savings matching the increase in investment, the increase in savings is associated with a decrease in the total receipts of entrepreneurs which contradicts the second condition set out in the 'manifesto'

that receipts of entrepreneurs or income and savings move together. It is clear that, though the distinction does apply to collectives, Keynes was considering an increase in investment 'financed' by more than an equivalent increase in savings out of quasi-rents (or the flow of rentier income to the University of Cambridge). So, Keynes argued, if there was an increase in investment associated with a proportionate or more than proportionate rise in the cost of production and/or the savings to finance the investment came disproportionately out of quasi-rents or profits then increases in investment could be associated with lower output and employment **and** lower quasi-rents or profits. Keynes thus did not answer the crucial question why the extent of the increases in the cost of production should be so associated with the increase in investment that quasi-rents or profits would fall.

Joan Robinson, in her reply to Keynes, May 1932 [CW, XXIX, 47] claimed that Keynes's first exceptional case was based on a special assumption about the elasticity of the supply of capital and consumption goods yet agrees with Keynes that it was not necessary to assume different elasticities of supply and that the point of discussing the two industries is that (i) one knows how much the investment has increased, i.e., what the increase in the output of capital goods is, and (ii) one wants to examine the relationship between changes in the price of consumption goods and costs of production in those industries to see if it is possible for overall output, employment and quasi-rents to be reduced.

It would appear that Mrs. Robinson was moving away from rising efficiency earnings in focussing on the elasticity of supply in the consumption good industries. Even if the case of extreme inelasticity held so that there would be a sharp diminution of quasi-rents in the production of consumption goods, that diminution in profits could only be brought about by an **expansion** in the volume of output and employment in the consumption goods industries. If that diminution of profits (together with the equal diminution of profits in the production of capital goods because of the assumption of equal elasticities) were sufficient to cause the postulated level of investment to be inconsistent with the flow of profits then the instability problem arises.

The question Keynes addressed in the second lecture of the 1932 Easter Term had gone beyond the Kahn multiplier. Keynes was extending the argument to the case of a two-way positive association between the levels of investment and profits. He was intent on investigating the possibilities of an increase in investment so causing increases in the cost of production in the consumption and capital goods industries, (though primarily the consumption goods industries) that investment and profits would not move together and the stability of the relationship between investment and quasi-rents thrown into doubt. Keynes had raced beyond the 'multiplier' and was arguing the stability of the relationship between increases in investment and increases in quasi-rents or profits dependent upon increases in the cost of production, resulting from the increases in investment - say, increases in wage rates, in the prices of raw material from cartel suppliers which adversely affected quasi-rents, profits and thereby reversing the expansion. It is not clear that the 'manifesto' and Keynes were after the same thing. As already indicated, Keynes, in setting out the

connection between the volume of investment and output and employment, had already investigated at least one exception to the monotonic relationship between changes in the volume of investment and employment.

I suggest he went further in the second lecture. He tried an extension to the positive relationship between investment and profits and, following the Kahn argument, concerned himself with the stability conditions and exceptions to the monotonic relationship between changes in investment and changes in quasi-rents. Had the authors of the *manifesto* pursued the dynamic question of how changes in the level of investment might be associated with changes in costs of production [i.e., shifts in supply curves rather than movements along them] in an advancing capitalist economy in which investment and profits interact in a stable fashion, how different *The General Theory* might have been.²²

Further discussions between Keynes and Kahn and among Keynes, Kahn and Joan Robinson took place on 8 May, 1932. There is a further note from Joan Robinson, May 1932 entitled "The Exceptional Case" [CW, XII, 377] on which Keynes's notes indicate the divergence of views arising from assumptions concerned with different elasticities of supply in the production of capital and consumption goods and shifts in those supply functions. A letter from Joan Robinson, 10 May 1932 [CW, XIII, 378] shows the drift. She focusses on the determination of supply curves as entailing a price sufficient to cover average prime costs and a profit per unit of output that is "...just sufficient to retain the marginal entrepreneurs." She points out, however, that "There is a time element which perhaps cannot be treated on a third dimension. But time is a common enemy to us all. I believe that like the rest of us you have had your faith in supply curves shaken by Piero." Further correspondence from Joan Robinson, 11 May, 1932 [CW, XIII, 379], indicted that she believed Keynes to be concerned with different elasticities of given supply curves while again Keynes replied, 12 May, 1932 that he was more concerned with the redistribution of profits accompanying an increment of investment. He says [CW, XIII, 379-380]

... if the increment of investment causes redistribution of profit, and the net effect on the output of industries losing profit is greater than the net effect on the industries gaining profit, then the increment of investment cannot be relied on to produce a net increment of output.

The possibility that some consumption industries will experience a decline in **output**, consequent upon an increase in investment **cannot** occur if the firms in the industries are merely moving upward along their individual supply curves but can only occur if the various supply curves are themselves being shifted upward proportionately more than the individual demands, both the products of the increase in investment. This is how the unfavourable redistribution of quasi-rents is brought about.

Finally, we may note that in his letter to Joan Robinson, 9 May 1932, Keynes says [CW, XIII, 378]

... I lack at present sufficient evidence to scrap all my present half-forged weapons: - though that is no reason why you should not

go on constructing your own."

Half-forged or not, the weaponry were different! Subsequently, in early drafts of chapters of *The General Theory*, Keynes went on to consider two cases which deal with the two points raised in the second Easter Term lecture. In drafts of Chapter 7, "The Monetary Theory of Production" and Chapter 8 "The Instability of Profit-Seeking Organizations of Production" [CW, XIII, 381-389], Keynes deals extensively with the case of a decrease in investment associated with so great a fall in quasi-rents owing to cost conditions for **given** prices of inputs (what he called efficiency wages) that the question of instability arises - and this possibility Keynes sets aside. In the draft of Chapter 9 "The Effects of Changes in the Rate of Earnings," Keynes asks the second question. Dealing again with a decline in investment which is associated with a **fall** in money wages, Keynes again raises doubts about such a decline stopping or reversing the decline in output profits associated with the initial reduction in investment. He concludes [CW, XIII, 394]

... on the balance of considerations, that there is no presumption that an **all-around** reduction of the variable costs of production will prove favourable to the volume of employment. [Emphasis added in the original.]

This is precisely the mirror image of Keynes's conclusion when he asked whether an all-round **increase** in variable costs, accompanying an increase in the level of investment will stop or reverse the increase in the level of output and employment.

Conclusion

I suggest that Keynes asked two questions in the second lecture of the Easter Term 1932: one about the *static* multiplier when the efficiency wages are given, the other about a *dynamic* multiplier when the change in nominal efficiency wages was said to bear some positive relationship to changes in investment. The possibility emerges that the change in efficiency earnings might impart greater but equilibrating swings to the volume of output and employment and prices and profits which would be associated with changes in the level of investment. The first question entailed flexible prices and output but given money wages, the second entailed flexible money wage rates with changes in them being driven by changes in investment. In subsequent work, except for the possible corrective function of downwardly flexible money wages no longer linked to investment, Keynes did not again deal exhaustively with the proposition that the causal force in explaining changes in efficiency earnings might be changes in investment and what relationship was necessary between the two to impart stability in the relationship between investment and profits. The *manifesto* and subsequent discussions focussed more on the first question and may have deflected Keynes away from even more exciting conjectures. His colleagues of the time have remarked on how Keynes could race away to new positions. Constraints of such flights are absolutely necessary but may, from time to time, narrow the scope and blur the vision. Keynes was on to the question: What, in the great equilibration between investment and saving in the

Treatise and **The General theory**, does determine the rate of change of efficiency earnings?

How exciting the discussion around the second lecture must have been. Alas, there are no further notes dealing with Keynes's first lectures in 1932, though two known early drafts of the table of contents of what eventually would be **The General Theory** (as produced from CW, XXIX, 49-50) written in 1932 exist and conclude this paper.

The Monetary Theory of Production

INTRODUCTION. CHAP. I. FUNDAMENTAL DEFINITIONS AND IDEAS

BOOK I THE INTERRELATIONS OF INVESTMENT, EXPENDITURE, PROFIT, AND OUTPUT

Chapter 1	The relation of Disbursement to Profit
2	The relation of Profit to Output
3	The relation of Earnings to Disbursement
4	The relation of Disbursement to Output
5	The relation of Investment to Foreign Trade
6	Generalisations
7	Historical Retrospect

BOOK II THE RATE OF INTEREST

BOOK III THE DETERMINATION OF PRICE

Chapter 1	The Differential of Consumption-goods and Capital-goods
2	The meaning of consequences of 'Bearishness'
3	The relation of Price to Cost of Production
4	The relation of Price to the Quantity of Money

BOOK IV THE CONTROL OF THE RATE OF DISBURSEMENT

Second earliest draft table of contents [1932]

BOOK I INTRODUCTION

BOOK II THE MONETARY THEORY OF PRODUCTION

Chapter 1	The relation of Disbursement to Profit
2	The relation of Profit to Output
3	The relation of Earnings to Disbursement
4	The relation of Disbursement to Output
5	The relation of Investment to Foreign Trade
6	Generalisations
7	Historical Retrospect

[The intervening chapter numbers do not appear in the original.]

BOOK III THE DETERMINATION OF PRICE

Chapter 19	The Differential of Consumption-goods and Capital goods
20	The factors determining Liquidity Preference
21	The relation of Price to Cost of Production
22	The relation of Price to the Quantity of Money

BOOK IV THE CONTROL OF PRODUCTION THROUGH THE RATE OF DISBURSEMENT

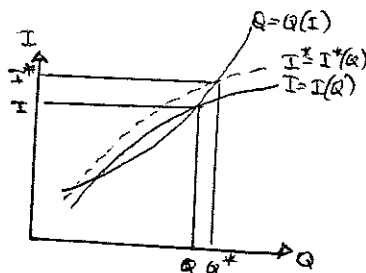
Chapter 23	Banking Policy
24	Public Works
25	The Dole
26	Taxation
27	Socialism

FOOTNOTES

1. I shall be offering a paper on the subject to the conference, 'Editing Modern Economists', the 1986 Conference on Editorial Problems, in Toronto, November, 1986.
2. There is no published account of lectures beyond the second nor is there any record of notes for additional lectures in the Keynes Papers in the Marshall Library in Cambridge. I should like at this juncture to express my thanks to Judith Allen who helped me in my searches through the Keynes Papers while I was a Visiting Fellow at Wolfson College, thanks to Professor Don Moggridge, in the Michaelmas Term 1985.
3. In correspondence, Sir Austin allowed, with respect to the 'manifesto', as how he was a consenting critic rather than an active author. All three were, of course, members of the 'Circus', involved in a discussion of Keynes's **Treatise**. See **JMK Collected Works**, hereafter CW, XIII, 337.
4. The growing recognition that this is so in Keynes's case is evidenced by such studies as G.L.S. Shackle, **Epistemics and Economics** (Cambridge: Cambridge University Press, 1972); R.M. O'Donnell, "Keynes" Philosophy and Economics (An Approach to Rationality and Uncertainty)," Ph.D. dissertation, Cambridge University, 1982; and Tony Lawson and Hashem Persaran (eds.), **Keynes' Economics: Methodological Issues** (Sydney: Croom Helm, 1985).
5. Paul A. Samuelson, "The General Theory." **Econometrica**, XVI, July, 1946, reprinted in R. Lekachman (ed.), **Keynes' General Theory: Reports of Three Decades** (London: Macmillan, 1964).
6. There are immediately four difficulties. First, $\Delta E'$ must refer to change in the volume of the **expected** gross receipts of entrepreneurs whereas ΔO refers to changes in the volume of current gross output. The problem of any difference between expected and actual receipts can be resolved by assuming that, in Keynes's short period, the short-run

expectations of entrepreneurs are being confirmed (cf., J. Kregel, "Economic methodology in the face of uncertainty." *Economic Journal*, LXXXVI, June 16, 209-228). Second, the gross receipts if interpreted as Income as Keynes does (CW, XXIX, 37) must include the expected quasi-rents of entrepreneurs (see, however, CW, XXIX, 65). Third, if O and E are not the same then E must be defined to include any above normal (or less any below) normal profits accruing to entrepreneurs. Fourth, one needs a sharp distinction between prices and quantities.

7. See appendix N, Keynes's Generalizing Tendency, in R.M. O'Donnell, *op. cit.*.
8. Rymes's emphasis. Keynes switches notation but following the hints of the editors of Keynes's *Collected Works* [cf., CW, XXIX, 39, n3] and referring to the correspondence between Keynes and Kahn in September 1931 [CW, XIII, 373-375] it seems possible to get the argument right.
9. It is a jump, not much of a jump but a jump nonetheless, to interpret Keynes's extension as illustrating a double-edge relationship between quasi-rents and investment.



10. The flow of quasi-rents is that which is expected by entrepreneurs. The difficulty is now very important for to be able to compare different levels of investment and quasi-rents one must, if Kregel's interpretation is employed, refer to those flow of quasi-rents actually accruing to entrepreneurs so that both positions of equilibria refer to positions where the short-period expectations of entrepreneurs are being confirmed. Keynes assumed that prime or variable costs and employment are positively correlated with profits or quasi-rents and the relationships between prices, money wage rates and the volume of output and employment need further exploration. The stability conditions themselves thus need such further exploration. Even if the marginal propensity to consume F is less than unity, the marginal propensity to investment $I'(Q)$ may be sufficiently high to impart local instability. Keynes went on to say "...we have to superimpose on the probable effects of changes in O , the probable effects of change in k in the same direction as the changes in O " [CW, XXIX, 42]. The k refers to that in Kahn's 1931 article.

11. The letter of transmittal of the 'manifesto' from Joan Robinson to Keynes was published earlier in CW, XIII, 376. The 'manifesto' itself, with Keynes's footnotes, is published in CW, XXIX, 42-45.
12. Joan Robinson apologized to Keynes for the somewhat 'dogmatic' air of the remarks in the 'manifesto' and noted that "...the upshot appears to strengthen your conclusions while throwing some doubt on the argument" [CW, XIII, 376].
13. In the formula $dQ = \frac{\delta}{(1 - F')[1 + E'(Q)] - I'(Q)}$, the autonomous change changes in investment, δ , could be replaced with an autonomous change in consumption expenditure (say, out of quasi-rents).
14. These last two points were Kahn's concern. See R. Kahn, "The relation of home investment to unemployment." *Economic Journal*, XLI, June, 1931, 173-198, reprinted in his 1972 *Selected Essays in Employment and Growth* (Cambridge: Cambridge University Press). See also R. Kahn, "Public works and inflation." *Journal of American Statistical Associations*, Supplement, March, 1933 also reprinted in his *Selected Essays*. See also R. Kahn, "The financing of public works - A note." *Economic Journal*, XLII, September, 1932, 492-494 (a response to Jens Warming, "International difficulties arising out of the financing of public works during depressions." *Economic Journal*, XLII, June 1932, 211-224) and R. Kahn, *The Making of Keynes' General Theory* (Cambridge: Cambridge University Press, 1984), fourth lecture. It should be noted that Kahn's source of saving argument included the results associated with any rise of prices associated with an increase in public works. The determination of the price level in the 1931 article, Kahn later argued, had as one of its main imports that of "Finally disposing of the idea that the price level is determined by its quantity of money." Letter from Richard F. Kahn to Don Patinkin, 19 March 1974 in D. Patinkin and J. Clark Leith (eds.), *Keynes, Cambridge and The General Theory*. The process of criticism and discussion connected with the development of *The General Theory* (London: Macmillan Press, 1977), 147. The volume edited by Clark and Leith also contains a handout (p. 83) by Samuelson demonstrating the "logical equivalence" of [a] finite-difference multiplier formula to a [linear] output determination model."
15. An early account is A.L. Wright, "The genesis of the multiplier theory." *Oxford Economic Papers*, VIII, June, 1956, 181-193. Later accounts, crediting Hawtrey with a greater contribution to multiplier analysis, are E.G. Davis, "The correspondence between R.G. Hawtrey and J.M. Keynes on the *Treatise*: The genesis of output adjustment models." *Canadian Journal of Economics*, XIII, November, 1980, 716-724. See also Neville Cain, "Hawtrey and multiplier theory." *Australian Economic History Review*, XXII, March 1982, 68-77.
16. There is evidence that Keynes's mind was moving in this direction. See the letter to Richard Kahn and Kahn's reply in September, 1931 [CW,

XIII, 373-375]. Yet there is evidence in the later lecture notes that, occasionally, Keynes still had difficulty with the multiplier in making the transition from the **Treatise** to the **General Theory**.

17. C.L. Barber, "The instantaneous theory of the multiplier," **Canadian Journal of Economics and Political Science**, XVI, February 1950, 78-82, reprinted in the **Collected Economic Papers of C.L. Barber**. Winnipeg: Institute of Economic Research, at the University of Manitoba, 1982.
18. In constant price terms, it is possible that
$$\frac{P_{C_0} \Delta K_1 + P_{C_0} C_1}{P_{K_0} \Delta K_0 + P_{C_0} C_0} < 1$$
 as well.
19. It was pointed out in the 'manifesto' that any increase in the costs of production in the consumption goods industries would also have to be reflected in the increased demand for the consumption goods.
20. See Keynes's notes on the back of a letter from Joan Robinson, May, 1932 [CW, XIII, 376].
21. See the letter from Joan Robinson, May 1932 [CW, XXIX, 47] for the interpretation that Keynes was talking about movements along supply curves, not shifts in them.
22. All three authors of the 'manifesto' had, were making or were about to make distinguished contributions to the **static** economics of the short period. Richard Kahn had written his dissertation and was lecturing on "The Economics of the Short Period"; Joan Robinson, following Sraffa, was working on the logical problems entailed in Marshall's assumptions of competitive entrepreneurs and constant returns to scale and the empirical problems of industries working at less than capacity which was to culminate in the **Economics of Imperfect Competition**, while Austin Robinson, not in the thick of the continuing debate involved in the creation of **The General Theory** after his participation in the Circus (see J. Clark Leith (eds.), **Keynes, Cambridge and The General Theory** (London: Macmillan, 1977) was writing **The Structure of Competitive Industry** (Hertfordshire: James Nisbet and Company, 1931). It was Mrs. Robinson who allowed that the Keynesian way of thinking had not at that time been properly inserted into the static **construction** of supply curves, and the determination of firm and 'industry' outputs, which were such an important part of her own pathbreaking work.