PKSG NEWSLETTER

5 OCTOBER 1996

EDITOR'S CORNER

I hope you have all had a good summer (or winter if you're reading this in the Antipodes). Since the last Newsletter, we have had three highly successful meetings: the Seminar in February, the Conference in March, and the Postgraduate Workshop on 1 November; abstracts of most of the papers from the first two events are provided below for those who could not attend. In the meantime, there was a discussion about the future of the PKSG following the November 1995 meeting, and then a meeting in February of those volunteers who were not snowed in (Vicky Allsopp, Vicky Chick, Paul Downward, Bill Gerrard, Fred Lee, Adrian Winnett) to pursue these discussions further. The outcome has been a range of changes, to the organisation of the PKSG and to the seminar arrangements.

First, the organisational locus of the PKSG has shifted to Leeds. We are most grateful to the University of Leeds for providing the back-up support for this move. This change started with John Hillard doing the layout for the last Newsletter - hence the new look. While mailings will now be done from Leeds, correspondence about the mailing list, etc. should be continue to be sent to Adrian Winnett (Department of Economics, University of Bath; e-mail: A.B.Winnett@bath.ac.uk). John Hillard (School of Business and Economic Studies, University of Leeds, Leeds LS2 9JT, e-mail: JVH@bes.leeds.ac.uk) is handling the financial side of things, including mailing out cheques for travel expenses. Offers of papers, suggestions for speakers, or more general suggestions for future seminars (including tying in with other seminars) should be sent to Adrian or John.

In the meantime, we are instituting some of the changes to seminar arrangements which have been under discussion over the last year. One is to try Saturday meetings as an experiment; this has the advantage of cheaper fares, but it remains to be seen whether you find this makes attendance at seminars more or less attractive. Another is to pursue the idea of locating seminars around the country. Again, there are financial benefits, in that we may receive support in kind from host universities. Third, we have introduced the first postgraduate workshop, organised by the graduate students at Leeds, to encourage this cohort of the membership. This was a great success and is well worth repeating.

As far as the future shape of the PKSG is concerned, those present at the November meeting had been in favour of forming an association. But it was subsequently decided to delay moving on this front until we knew the result of our application to the ESRC for funding for 1997-98. I am sorry to say that we now know that the application was not successful. We are being partially funded by the Royal Economic Society for this calendar year. Fortunately we now have a significant financial cushion for 1997, due to generosity from two quarters. Paul Ormerod's company, Post-Orthodox Economics, has made a donation of £1,500 towards the costs of the Group in 1997, and John Hillard has made his Keynes Fund at Leeds available to the PKSG. Clearly we need to consider our future financial position carefully. So for the time being we will take things one meeting at a time, i.e. you will be told with the notice of each meeting how far travel expenses can be covered; we may need to move to a norm of only partial coverage and/or modest seminar fees.

Another drain on funds is postage of notices and the Newsletter. You can contribute to savings, if you have not already done so, by receiving material by e-mail rather than posted hard copy. In any case, the mailing list needs up-dating. So for both reasons, you will find a tear-off slip asking you to indicate whether you want to stay on the mailing-list, and asking for

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your e-mail number. Anyone who does not reply will be assumed not to want to remain on the list. We will in future need to consider charging for mailing hard-copy, unless of course you do not have the option of receiving it by e-mail. So please give us your e-mail number!

It is important, if you have views about how we should proceed (on matters of organisational detail or broad strategy), that you make these views known. You can write to me, Adrian or John, and/or you can write to everyone via the Newsletter. I shall be particularly happy to publish expressions of view about the future of the PKSG. I am grateful to Jan Toporowski for his contribution along these lines in this issue and to Fred Lee for his 'reply to the critics'. Regarding attendance, I am grateful to Fred Lee for compiling statistics on attendance at the last sixteen meetings; these are set out below, and I will be happy to publish any comments on the data in the next Newsletter.

Finally, this time of change provides the occasion for us to express our gratitude for past contributions to the PKSGs activities. On behalf of the PKSG, I would like to express appreciation to Iraj Seyf for performing Treasurer's duties. We are grateful too to UCL for providing the PKSG with rooms, and secretarial and other forms of logistical support. But, most important, I am sure I am speaking for you all when I express heartfelt thanks to Vicky Chick for all her tremendous efforts, both in starting the PKSG with Philip Arestis in 1988, and in keeping it running so successfully at UCL all these years.

Sheila Dow, Department of Economics, University of Stirling, Stirling FK9 4LA, Scotland, UK. Tel: 01786-467474; Fax: 01786-467469; e-mail: S.C.Dow@stirling.ac.uk

Please return this slip (or send an e-mail) to Adrian Winnett, Department of Economics, University of Bath, Bath BA2 7AY. e-mail: A.B.Winnett@bath.ac.uk

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Making Post Keynesianism Safe For Its Fellow-Travellers

Jan Toporowski

Eight years ago I was invited to attend a seminar organised by two friends of mine, Vicky Chick and Philip Arestis. I went along to the first meeting of the Post Keynesian Study Group, and have been going along ever since. Indeed, this regular attendance must be something of a record for someone who does not naturally regard himself as a Post Keynesian. With the discussion on the future of the PKSG now open, I have been reflecting on the reasons why I have been so happy to attend the seminars in the past, and on what kind of organisation would secure those features that I regard as so valuable in the seminars hitherto.

Undoubtedly a major attraction of the seminars has been their scholarship. One of the greatest pleasures for those who have attended the seminars has been their wide-ranging discussions between people who have read and thought about the issues raised. Another has been the sheer sanity of debates in which reason is not suspended because mathematics is expounded, nor reduced to abject banality by Newey-West HAC covariance matrix estimators, Granger-Sims causality tests, VAR coefficients, and Nash equilibria. This scholarship is largely the outcome of what I feel is an important animating factor of our discussions, namely the participation of a wide range of people who do not regard themselves as Post Keynesians. I recall numerous Kaleckians, at least three Marxists, a couple of neo-Ricardians, one or two institutionalists, and at least one Austrian, who gave papers and took part in proceedings. Without them, the Post Keynesians (and indeed the participating Kaleckians, Marxists, neo-Ricardians and Austrians) would lose that friendly, but critical, input into their discussions, without which those discussions could easily degenerate into self-congratulation, complacency, shallowness, and cliched thinking. With that input, all of us, Post Keynesians, Kaleckians, neo-Ricardians, Marxists, institutionalists and Austrians, have improved beyond measure the quality of our debates, thought and research. All of us have not only learned much about our own areas of interest but also extended the range of our thought and research.

I am therefore worried by proposals to replace the PKSG by an explicitly Post Keynesian Association which might narrow down this broader participation in the work of the Post Keynesians. In addition to discouraging the full and equal participation of fellow-travellers, I am concerned that it could be the first step into a Post Keynesian ghetto and the decline of our lively debates to mere discussion between the like-minded, as has already happened among some Marxists and Austrians. It would further encourage ignorant journal editors to return scholarly articles with the already too-common dismissal: 'Why don't you try it on one of your own journals?'.

Of course Post Keynesians are a broad and very friendly church, and many Post Keynesians will wish to assure fellow-travellers that they really are Post Keynesians who should therefore belong to a Post Keynesian Association if only to ensure that the broad range of discussion is maintained. For many fellow-travellers this will be entirely satisfactory. For some, however, such an invitation will be a test of intellectual honesty, because they feel too critical of Keynes, or have drawn their intellectual inspiration elsewhere. Most will probably compromise, join, and become no more than occasional contributors to Post Keynesian discussions. A Post Keynesian Association would be the poorer for such diffident membership.

My own preference would be to replace the PKSG by an association to promote economic research of the kind that is now done around the PKSG. Such an association could be called the Joan Robinson Society for Economic Research. The Society could have as one of its aims 'to continue the work of the Post Keynesian Study Group. This would be a very apt tribute to the most eminent woman economist of our times, who was also the key personal link between Keynes, Kalecki, Dobb and Sraffa. Such a title would make clear the Post Keynesian commitment of the association, as well as indicating its sympathy with broader progressive and left-wing economic thought. It would also be a clear sign of the scholarly commitment of its

members, making it that much more difficult to marginalise its activities, or confine them to a 'ghetto'. Such a name for the association would demonstrate our commitment to studying a broad range of economic problems and issues, rather than a commitment to theoretical dogmas.

The Society should have two further aims. One should be to facilitate and promote scholarly research among research students. This is an especially important aim because it is now more difficult than ever to write and complete a doctoral thesis, and the reduction in the numbers of young post-doctoral scholars with new views and ideas is contributing to the decline of scholarship in the economics profession.

Secondly, the Society should aim to increase understanding of business, finance, economic policy, industrial relations and other applied areas of economics. This could be done by introducing an Industrial or Business Forum into the seminar meetings of the Society. In such a Forum, someone from business, government, banking, finance or the trades unions would be invited to give a brief address and answer questions on problems in her or his field of work. The practitioner would be asked to avoid giving an academic presentation, so that we can have the most direct insight into her or his business and work, and so that she or he is not discouraged by any need to footnote her or his presentation.

This would be an effective way of integrating practical issues within our academic discussions, as well as providing a useful and informative diversion from our more theoretical concerns. Such a practice would meet official funding bodies' concerns about the lack of practical orientation in economic research. Indeed, it would place the Society at the head of the movement to give our profession a new orientation that is in touch with the real world and recognises problems in existing economies. Keynes would have approved of that. South Bank University, April 1996.

The Future Of Post Keynesian Economics: A Response

Fred Lee

When the PKSG was contemplating establishing a newsletter, Sheila Dow asked me to write a controversial piece on Post Keynesian economics for the first issue. My article on 'The Death of Post Keynesian Economics?' has proved to be controversial as indicated by the number of responses it generated. While the comments made by Peter Kriesler and Joseph Halevi support and add to the tenor of my article, those made by Alistair Dow, Peter Riach and Paul Downward misunderstand the arguments I was trying to make. First, as noted in my article, I used Post Keynesian as a generic short-hand term to cover the various non-mainstream approaches to economics, including Sraffian, marxian, evolutionary, and Post Keynesian economics. It is clear from talking with non-mainstream economists that they are already being influenced by the different approaches and, indeed, there is a growing recognition that closer co-operative research and theory building is the way forward. The death of Post Keynesian economics in the UK was based on the institutional pressures facing British economics departments. I still stand by my argument since it is quite clear that economics departments (even ones which have Post Keynesians) are not hiring Post Keynesian economists. As a result, within ten years the number of Post Keynesians in economics departments will decline by 50% or more, resulting in the vast majority of British economics departments having no Post Keynesians on staff at all. To escape this demise, Dow and Downward suggest that Post Keynesian economics could survive outside of economics departments, such as in sociology departments or business schools. While it is true that individual Post Keynesian economists can survive outside economics departments, Post Keynesian economics can not. The reason is that there would exist no institutional basis for propagating it; or, to put it bluntly, no business school or sociology department will establish an MA or PhD programme which concentrates on training Post Keynesian economists.

Lastly, Riach and Downward have misunderstood my position on the teaching of Post Keynesian economics. Currently there is not a single economics department in the UK which does not have some neoclassical economists and in all but perhaps two or three neoclassical economists outnumber Post Keynesian economists. Thus, if a Post Keynesian economist decides to teach only Post Keynesian economics in his/her courses, students will still have ample opportunity to learn neoclassical economics from neoclassical economists. It is preferable for students to get different ideas from different lecturers which believe in them, as opposed to from a single teacher disseminating a range of ideas, some of which he/she finds categorically wrong and offensive. The former will be exciting to listen to, while the latter will generate no intellectual excitement at all. What is desired is a pluralist department not simply pluralist individuals. So I say Post Keynesians (as well as neoclassical economists) should implant their theories upon students by enthusiastic persistent urging and then go away and let the students make up their own minds.

De Montfort University, March 1996

NOTICES

Regulation School Newsletter

A message from Pascal Petit: Lettre de la Regulation, the Regulation School newsletter, is available on the web at the following address:

http://www-com.grenet.fr/irepd/lettre.html

Scottish Economic Society Centennial Conference, Stirling, 8-9 April 1997

For further details please contact Sheila Dow, Department of Economics, University of Stirling, Stirling FK9 4LA. E-mail: S.C.Dow@stirling.ac.uk

Review of Political Economy, Kalecki Special Issue

The year 1999 will mark the hundredth anniversary of the birth of Michael Kalecki. The editors intend to commemorate this anniversary with a special issue devoted to Kalecki's work and legacy. We invite contributions on any aspect of Kaleckian economics broadly defined. The submission deadline is 30 March 1998. All submissions will be refereed according to the usual procedure. Please direct all enquiries and submitted articles to: John King, School of Economics, La Trobe University, Bundoora, Victoria, Australia 3083. Tel: (61) 3 9479 1707; Fax: (61) 3 9479 1654.

BOOK REVIEW

Giacomo Becattini et al., Federico Caffè. Realtà e critica del capitalismo storico, a cura di Attilio Esposto e Mario Tiberi, Meridiana Libri, Catanzaro, 1995.

This book contains a collection of papers presented to a Conference in honour of the Italian economist Federico Caffè organized in November 1993 in Penne. After Caffè's sudden disappearance for mysterious causes in 1987, his work has been discussed in many books and conferences but the proceedings published in this volume have a particular significance for at least two reasons. First, the importance of the participants to the Conference testifies to the debt of gratitude that the whole community of Italian economists owes to him. Second, the volume gives a global view of Caffè's contribution that went well beyond the narrow limits of economics.

Even if much emphasis has been given to his work in economic policy as it is described by Giovanni Palmerio ("Il contributo di Caffè alla teoria della politica economica") and by Vittorio Valli ("Istituzioni e teoria economica in Federico Caffè"), the other contributions included in the volume show how Caffè's life has been devoted to both building up as well as tearing down economics. As a builder, he has introduced a new way of perceiving the idea of economic and social reformism that was connected with his concept of historical capitalism,

that is - as one of the two editors of the book, Mario Tiberi, writes in the Introduction - a society in which many conflicting interests regulate and correct the spontaneous mechanisms of the market. As a critic, consequently, he constantly attacked economic theory in favour of a stronger pragmatism and a more motivated and purposive attitude.

A first contribution by Michelangelo Bovero ("Una certa idea di riforma. Giustizia e Stato nell'opera di Caffè") analyses Caffè's political theory which dealt extensively with the idea of progress and the role of the State. In a more economic context, Federico Vianello ("Federico Caffè e l'«intelligente pragmatismo»") defines Caffè's political conception as intelligent pragmatism – or the keynesism of Keynes – implying the refusal of any automatic rule and the necessity for the economist to consider every single situation in order to select the fittest political action and to execute it more flexibly. At the same time, Vianello reminds how Caffè always defended the idea of Welfare State even when most economists have declared it dead. The causes of this defence are extensively discussed by Giuseppe Ciccarone ("La tipologizzazione dei regimi di Welfare State e il pensiero di Federico Caffè") and especially by Maurizio Franzini ("Il «trade-off» tra efficienza ed equità. Gli argomenti critici di Federico Caffè"), who shows how Caffè attacked the trade-off between efficiency and equity with powerful arguments concerning mainly the social costs of economic inequality.

The remaining papers deal with the historical roots of Caffè's ideas. Roberto Faucci ("Federico Caffè e gli economisti italiani dell'Ottocento e del Novecento") reconstructs the strong relations between Caffè and the Italian school of economic thought. Pierluigi Ciocca ("Per il tramite dei grandi economisti: il lessico «non famigliare» di Federico Caffè") offers some enlightening examples of Caffè's art of writing which belongs to the long tradition of Italian economic literature. Giacomo Becattini ("Per Pigou, oltre Pigou. L'economia del benessere nel pensiero di Federico Caffè") shows how Caffè drew inspiration from authors like Mill, Sidgwick, Marshall and Pigou to base his theory of welfare economics.

Finally, the reviewer offers to the readers two personal remarks about the author and the book. The first might seem critical, but it isn't. Some contributions point out how Caffè often had a too idealistic conception of political action, which during the last years before his disappearance conduced him to take radical positions apparently in contrast with the "intelligent pragmatism" characterising his scientific career. Such a choice, that could also be explained through factors concerning private or interior life, represents a further proof that Caffè's inheritance extends well beyond economic theory to support a very active conception of the economist's role in the society.

A second remark concerns the picture of the Italian economist among his students, drawn by Sergio Steve ("L'esperienza di Caffè come docente universitario"). The loss of a person practising such a strong and continuous exchange between scientific work and passion for teaching is probably the main fault we could attribute to Caffè if his disappearance had really been voluntary. For the rest, the quality of his work assures us that he will continue to have a great influence upon the Italian approach to economics.

Alessandro Innocenti, Universita degli Studi di Siena

PAPER ABSTRACTS

Seminar, 9 February 1996, University College London

Geoff Harcourt: Economic Policy, Accumulation and Productivity

To attain and then sustain full employment in advanced capitalist economies requires a combination of interrelated policies. In this essay, we discuss, especially, pay policy and its relationship to sustaining full employment. The starting point is the analysis originally developed by the late Wifred Salter (1960; 1966) of productivity and technical change — the proposition that a major determinant of productivity levels and their rates of growth is the rate of investment. It is the means by which new and better ways of doing things are embodied in the stock of capital goods. Nevertheless, the stock of capital goods will always be a mixture of

new best-practice techniques and older vintages, associated with lower productivity and higher running costs yet still profitable to keep running. They have only to cover their short-term variable costs, while the new machines must be expected to cover their total costs, including a normal rate of profit for the industry concerned. A crucial determinant of the proportion of new to old machines in any industry's stock of capital goods is therefore the level and rate of change of wages, as well as the rate of accumulation itself.

The rate of accumulation not only has these supply-side effects; it is also obviously a major determinant of activity and employment. We have, therefore, the possibility of a virtuous cumulative process which will be accompanied by the possibility of steadily rising real wages and other incomes. To achieve this goal we need to make sure that wages in all industries rise by amounts which are determined principally by the growth of **overall** productivity and the general price level. In this way, all may share in the rising prosperity which the complementary relationship of capital and labour at the level of the system as a whole make possible. In the essay we explore this primary relationship and the complications that arise from different market structures, changes in the terms of trade, and valid reasons for departing in particular instances from the principal rule of pay policy outlined above. In doing so we argue that flexible labour markets lead to changes in wages which preclude the benefits of the interrelated process analysed above from ever being fully realised.

Bill Gerrard: Interest Rates and Inflation: Some Empirical and Theoretical Considerations

The paper has two objectives:

- 1. to establish the stylised facts of the relationship between interest rates and inflation in the UK in the period 1964-93, and
- 2. to review the literature on the Gibson paradox and the Fisher effect in order to identify competing hypotheses on the nature of the data-generating process.

An analysis of UK monthly data on interest rates and inflation, 1964-93, suggests four principal stylised facts:

- 1. There is a positive relationship between long-term interest rates and inflation but that relationship is stronger over the whole period than in individual sub-periods.
- 2. There is a positive relationship between short-term interest rates and inflation which has tended to become stronger in recent subperiods.
- 3. The positive relationship between interest rates and inflation is always stronger for the 12-month inflation rate compared to the annualised 3-month inflation rate.
- 4. The relationship between interest rates and inflation was highly unstable during the 1970s.

In A Treatise on Money Keynes discussed the Gibson paradox that interest rates and prices are positively correlated. Keynes provided a similar explanation of this phenomenon to that developed previously by Wicksell. Both Wicksell and Keynes explained the existence of a positive relationship between interest rates and prices as the result of real shocks to the natural rate of interest and lags in the adjustment of the market rate of interest. This Wicksell-Keynes model has potential for development.

The theoretical determinants of the Fisher effect of a one-to-one relationship between expected inflation and nominal interest rates are analysed in a simple aggregate demand-and-supply model. The Mundell-Sargent-Visco result is demonstrated: if the level of output is fixed, the full Fisher effect will only occur if there is either no real-balance effect or no liquidity preference. Mundell (1963) assumed both liquidity preference and a real-balance effect and, as a consequence, derived a partial Fisher effect. Sargent (1972) assumed that there is no real-balance effect in the long run, implying a full Fisher effect.

Second International Conference on KEYNES, KNOWLEDGE and UNCERTAINTY, Leeds, 16-17 March 1996

Brian Loasby: The Division and Co-ordination of Knowledge

The requirement for co-ordination derives from the division of knowledge. The division of knowledge results from the division of labour, and is essential to the growth of knowledge. Different kinds of knowledge require different frameworks, which may be difficult to combine; skill in performance (or know-how), in particular, is not often easy to communicate. No single unifying scheme is possible; nor is it desirable, for it would drastically constrain the variety of trial and error by which knowledge grows. People and organisations create their own networks, which form oriented structures of complementary human capitals, each of which facilitates the growth of compatible knowledge. Though all new knowledge invalidates some previously-existing knowledge, local adjustment is not usually difficult; but new combinations may require the replacement – and therefore the destruction – of existing networks.

I Roundtable on Keynes

Vicky Allsopp: Trust, Time and Uncertainty

This paper examines the nature and significance of trust in economic relationships, whether in market or non-market relationships. Different conceptual treatments of time are emphasised as well as the related ideas of knowledge ignorance and uncertainty for explaining the functions and importance of trust. Trust has not featured conspicuously on the conventional economic agenda. The paper discusses why trust has been largely ignored in the mainstream debate, how trust can be categorised and what happens when trust breaks down. The main argument is that trust provides an important lubricant for human economic relationships and amounts to something more than an economiser of search and transactions costs. It provides a fundamental basis for action, vital for the functioning of the economic system as a whole. Whether manifested in unconscious routines or in conscious deliberation, trust matters for economic outcomes.

Anna Carabelli: Keynes's Speculation and Reasonableness: In defence of a theory of rationality other than Bayesian one.

Many authors have recently dealt with Keynes's analysis of speculation. These include Cottrell, Davis, Lawlor, Mini, Pratten, Runde, Soros and Winslow. They deal with the contrast between the theory of efficient markets and Keynes's view of money markets, uncertainty and liquidity preference. These contributions, however, depend the acceptance or denial of the relevance of a *Treatise on Probability* for Keynes's economic method. They are therefore inevitably connected with one of the various interpretations of the role of probability in Keynes's thought. They are also connected with the problem of the continuity or discontinuity (weak or strong) between Keynes's early and mature writings.

These contributions raise the following questions: in the GT is Keynes implicitly adopting a subjective/Bayesian view of probability or is he still holding by his old logical view of probability? Is he defending a notion of rationality as reasonableness and, if so, of what type is this rationality? Is he suggesting a view that economic behaviour is in general totally irrational? Is there a 'logic' of uncertainty which Keynes applies in his own approach to speculation and investment or are all the hypotheses and conventions adopted by agents in their economic practices merely ad hoc?

The recent discussion on Keynes's theory of speculation and liquidity preference and also the recent re-interpretations of his general philosophy highlight the problem of the connection between Keynes's view of speculation and liquidity preference in the GT and his own view of uncertainty and probability in TP. So, the question of the relevance of TP for Keynes's economics, until recently considered resolved, is reopened.

I wish to contribute to this discussion by suggesting a step back to 1910. I examine the manuscript notes written by Keynes for the preparation of 'The Lectures on Company Finance

and the Stock Exchange' for the Lent term of 1910, - where he analyses the nature of speculation. I argue that these notes constitute the starting point for Keynes's analysis of speculation: probabilities with partial ordering; non-additive probabilities which do not secure comparability; situations often of total incommensurability and non-rankability of probabilities. This approach to probability led Keynes to put forward an analysis of money markets which was, from the very start, original and non-traditional: where inefficiencies, excessive volatility, panic behaviour, short-termism and conventions are the norm and not the exception – analysis whereby, for example, in the mind of the same economic agent, 'apparent' opinions may quite reasonably cohabit with 'real' ones.

By taking a step back, I find new continuities between the early and the mature Keynes. But new and unsolved problems of interpretation are to be faced. In his early analysis of speculation there are already elements that characterise his later analysis. Moreover, these elements are connected implicitly with his analysis in TP. This means that what we are used to considering new elements in chapter 12 of the GT are not actually so.

Athol Fitzgibbons: The Microeconomic Foundations of Keynesian Economics

Keynesian economics is the economics of uncertainty, but is it properly the economics of uncertainty and irrational behaviour, or the economics of uncertainty and rational judgement? The economics of uncertainty and irrational behaviour postulates that uncertainty forces investors to adopt irrational conventions, which then manifest in unemployment and other forms of pathological economic behaviour. But though exegetical support for this theory can be found in Keynes's *Treatise on Money* and his *General Theory*, it suffers from two defects:

- 1. It must assume that government policy makers can solve a problem that private asset holders cannot. For if government policy makers were also irrational, macroeconomic policy would be impossible.
- 2. The theory has no compelling response to the classical theory of rational expectations. In particular, why should asset holders be misled by money illusion over long periods of time? The uncertainty and judgement paradigm meets these objections, it has just as much exegetical support in Keynes's writings, and in my view it will be more fruitful. It suggests that the essence of Keynesian economics is not irrational behaviour, but the imperfect state of knowledge. Keynesian economics is more general than classical economics because classical economics illicitly slips in assumptions that the future is known. However if the imperfect state of knowledge is of the essence, then what sort of behaviour can we expect in the markets? Very little attention has been given to this question, and this paper addresses some of its aspects.

Alessandro Vercelli: Uncertainty, Rationality and Learning

Rational choice under uncertainty is at the same time a presupposition and consequence of learning. The feedback between rationality and learning may be clarified by delving into the foundations of decision theory under uncertainty. This permits a deeper understanding of the strict correspondence between different modalities of uncertainty and different concepts of rationality and learning, which can contribute to defining the scope and main shortcomings of the interaction between rationality and learning in economics. It is argued that only a theory of economic behaviour under 'hard' uncertainty, which assumes 'designing' rationality and allows for time irreversibility, may account in a satisfactory way for strategic learning, and may therefore explain the genesis, persistence and evolution of economic rationality. This perspective is claimed to be substantially consistent with Keynes's own point of view. This thesis is illustrated with reference to the theory of liquidity preference.

II Econometrics Roundtable

Philip Arestis and Iris Biefang-Frisancho Mariscal: Conflict in UK Wage and Unemployment Determination

This paper puts forward a theoretical model of wage and unemployment determination in which historical and ideological elements, in addition to the more economic variables, play a role. The underlying idea of the model is that conflict in the work place arises over labour productivity and the real wage (Bowles and Boyer, 1990; Skott, 1991). Workers strive for a high real wage and low work intensity. The means workers have at their disposal to enforce wage claims is the threat of a decline in productivity or a complete withdrawal of labour. Firms wish to minimise unit labour costs by balancing the direct cost of a wage payment against its effort enhancing effect. The means employers have to discipline wage demands is the threat of dismissal. The real wage firms are prepared to offer depends on work effort, where the latter is determined by the real wage and other economic, social, political and ideological factors (Arestis and Skott, 1993; Skott, 1991). These elements are the cost of job loss, the degree of conflict over income shares and worker militancy (Rowthorn, 1977; 1995), notions of fairness between different groups of workers (Hicks, 1975), and notions of threat and fear (Boddy and Crotty, 1975).

The cost of job loss is determined by the real wage, expected real wages, real unemployment benefits, and the unemployment rate which reflects workers' re-employment chances in case of job loss. The degree of conflict in the labour market depends on the aspiration gap, which is the difference between the target and the negotiated profit share. While the negotiated profit share is a residuum from the bargaining process, the target profit share depends, amongst other variables, on capacity utilization, where the latter may be described by capital stock and economic activity (Rowthorn, 1995). When we talk about notions of fairness, we are concerned with the wage structure, where workers resist money wage cuts for fear of a decline in their relative position in the wage hierarchy (Keynes, 1936). The importance of preserving the existing wage structure may be explained by the notion of fairness. Although, the rate of unemployment may be understood as a disciplining device for high wage claims, we experience that even when the level of unemployment is high, there is little pressure on wage demands. In contrast, when unemployment is rising, employed workers fear losing jobs and the faster unemployment rises, the more threatened workers feel and may give in on wage objectives (Boddy and Crotty, 1975).

The discussion revolves around the relationship between labour productivity and the real wage. In fact, wages are negotiated, and wage negotiations determine the nominal wage on the basis of workers' expected real wage, so that the nominal negotiated wage may be derived as a function of expected prices, the real expected wage and the socio-economic variables, discussed above. The theoretical model was estimated and tested. Two long-run relationships could be identified, namely a real wage and an unemployment equation. Nominal wage acceleration, the main concern of our study, is significantly determined by an error correction term, real wage growth, a tax and import wedge, the growth in real unemployment benefits and the percentage change in the unemployment rate.

Roger Backhouse: How do Economic Theorists use Empirical Evidence? Two Case Studies

The main objective of this paper is to compare the role played by empirical evidence in Post Keynesian and mainstream economics. Given the methodological claims often made by post Keynesian economics, one would expect to find significant differences. This objective is approached through an analysis of the way empirical evidence is used in two textbooks: Lectures on Macroeconomics, by Olivier Blanchard and Stanley Fischer (1989), and The Post Keynesian Approach to Economics, by Philip Arestis (1992). The background to this study is a broader concern with the role of empirical evidence in economics more generally, for, despite extensive discussion of the problem in the methodological literature, it is an issue that is far from thoroughly understood. At the same time, there is widespread scepticism about what

econometrics has managed to achieve, for whilst empirical evidence has undoubtedly played an important role in parts of economics (albeit not the dominant one), the crucial evidence has, by and large, not been formal econometric tests or estimates of coefficients. Equally important has been informal empirical evidence. This scepticism about the importance of econometrics in influencing the course of economic theory is reinforced by doubts about econometricians' practices. This investigation of the way empirical evidence is used in two graduate textbooks reveals significant differences, as well as some remarkable similarities. Methodological differences do matter. Substantive differences in the content are accompanied by very different styles. Empirical evidence plays an important role in both books, but it is used in a great variety of ways.

Paul Downward: Realism, Econometrics and Post Keynesian Economics

This paper explores the role of econometrics as a research tool for economists. In a related manner the purpose of economic theory is also discussed. The econometric literature on pricing is used as a reference point to address these methodological issues. In some respects this limits the generality of the discussion. On the other hand, too often methodological discussion is confined to highly abstract discourse. Those impatient to 'get on with things' often ignore the full (potentially weak) basis of their knowledge claims. In this respect there is much to be gained by integrating methodological discussion with applied work. This is, of course, of paramount importance to economic approaches outside the mainstream, particularly in attempting to develop convincing alternative analyses of economic phenomena based in realism, which is an aspiration of Post Keynesian economics. Concern for the adequacy of knowledge claims as well as the provisions of concrete results go hand in hand in moving towards this objective.

The main argument of this paper is that econometric work cannot be decisive in distinguishing between Post Keynesian theories of pricing though some distinction with neoclassical pricing theory is possible. The general problems associated with econometric evidence are of more concern for neoclassicals who have tended to exclusively cite/ invoke this type of analysis. Nonetheless, as part of a broader, realist, empirical research agenda econometric evidence may have a constructive role to play for Post Keynesians. A set of (distinguishing) metatheoretical characteristics is presented for neoclassical and Post Keynesian economics. It is argued that each approach reflects particular ontological bases and has specific epistemological implications. These ideas are then discussed in exploring neoclassical and Post Keynesian pricing theory. There follows an investigation of the methodological role of evidence from Post Keynesian and neoclassical perspectives. In particular the concerns of Keynes for econometrics are raised and an evaluation of the econometric evidence on pricing is presented.

Bill Gerrard: The Role of Econometrics in a Radical Methodology

The objective of this paper is to argue for a more constructive approach to econometrics by Post Keynesians. It is argued that econometrics can, and should, be part of a radical methodology. Two alternative clusters of methodological beliefs in economics are identified: a 'conservative' cluster, generally protective of mainstream economic theory, and a 'radical' cluster with a more fallibilist approach to economic theory. It is shown that the conservative cluster on methodological beliefs are embodied in two econometric methodologies: the theory-driven AER/textbook approach and the data-driven VAR analysis. Both these methodologies inhibit any critical empirical evaluation of economic theory. In contrast the LSE approach to econometrics, particularly the general-to-specific modelling strategy associated with David Hendry, incorporates a radical, fallibilist perspective to economic theory, allowing for a more meaningful, critical interaction between theory and empirical evidence. It is concluded that the LSE approach to econometrics is compatible with the radical methodological outlook of Post Keynesians.

Paul Ormerod: Post Orthodox Econometrics

The paper first considers briefly the record of the post-war research programme in conventional macro-economic modelling. Both in terms of forecasting accuracy and of structural understanding of the economy, very little progress has been made. It is argued that the failures of forecasting are inherent in the nature of macro-economic time-series. It is simply not possible with most macro-data series to generate forecasts over time which have an error variance significantly less than the variance of the data itself. Conventional econometricians such as David Hendry [EJ July 1995] are beginning to move towards this position. Hendry suggests that there is 'a limit on our ability to forecast even with parameter constancy', and places this limit at some 4 to 8 quarters ahead. The paper cites results I have obtained with Michael Campbell using techniques from the dynamic systems and non-linear signal processing literature to argue that this is far too optimistic. For economies such as the UK, it may not be possible to forecast meaningfully even one quarter ahead. An important implication of this result is that conventional short-run stabilisation policies cannot work, even if the structure of the economy were well understood. In the next section I argue that most existing applied macro-economic structural relationships are over-fitted. The statistician Chris Chatfield [JRSS A 1995] argues that this is a general fault of a great deal of statistical modelling. Advances in computer technology have far outstripped developments in statistical theory. As a result, not only are most models fitted to time-series data over-parameterised, but the data-mining process by which they are selected means that there is no adequate statistical theory with which to judge the published models. This criticism applies with particular force to the data-driven approach which has dominated time-series econometric modelling in the UK for twenty years. The battery of tests which must be applied to equations before they are deemed fit to publish in respectable journals looks impressive. But the equations which are reported are invariably the result of intensive trawling of the data. In local time neighbourhoods very simple linear models offer a good explanation of key macro-economic relationships in the OECD economies. However, a small number of shocks have caused permanent shifts in key relationships such as those between inflation and unemployment and between unemployment and growth. It is the task of econometrics to estimate very simple relationships which have a sound theoretical base. An important purpose of estimation is to identify the periods when breaks occur. It is the task of political economy more widely to explain such breaks (e.g.: the very different inflation responses in the OECD following the oil price rise).

III Roundtable on International Perspectives

Paul Davidson: Policies for Fighting Speculation in Foreign Exchange Markets: The Tobin Tax vs. Keynes's Proposal

The Tobin tax, i.e. a small tax on all foreign exchange transactions, has been put forward as a method of preventing disruptive speculation that has deflationary real consequences. The paper demonstrates:

- 1. the Tobin tax is too small in magnitude to have any significant impact on restraining large speculative movements, and
- 2. the Tobin tax will always have a larger adverse impact on real international trade than on international portfolio transactions. Consequently, the Tobin tax is exactly the wrong type of policy.

The Tobin tax solution is then compared with Keynes's 1944 suggested plans for preventing hot money international (portfolio) flows. The Keynes plan is then converted into a twenty-first century institution for international payments clearing while protecting each nation's economic autonomy.

Will Milberg: Say's Law in the Open Economy: Keynes's Rejection of the Theory of Comparative Advantage

While much ink has been spilled over the question of Keynes's trade *policy* views, very little has been said about his explicit or implicit *theory* of international trade. But - as Keynes

himself stressed - all policy positions reflect an underlying theory, and Keynes's views on trade theory were perhaps more controversial even than his political stance of 'pragmatic protectionist'. As he developed his theory of the monetary production economy that would form the framework for the General Theory, Keynes came to reject the idea of comparative advantage as the determinant of the direction of trade. His position was contrary to the views of both Marshall, his former teacher and expert in trade theory, and Eli Heckscher, whose 1919 article has been credited with first stating the factor endowments theory. The principle of comparative advantage assumes full (or at least constant) employment and a price adjustment mechanism sufficient to convert comparative cost differences into absolute money cost differences and bring balanced trade. Keynes rejected the assumption of such an automatic adjustment mechanism, arguing instead that interest rates - not prices - do the adjusting, and that a persistent trade imbalance – not balanced trade – is the likely outcome. For Keynes, the balanced trade implication of comparative advantage theory is equivalent to Say's Law in an open economy context, whereby an addition to export supply automatically creates an import of equivalent value, or vice versa. Persistently unbalanced trade has important policy implications, since it leads to interest rate pressures that will move the economy further away from full employment.

I discuss Keynes's own theory of international trade, and then I argue that one of the reasons for placing the *General Theory* in a closed-economy framework was Keynes's belief that the argument for the theory of effective demand would have been weaker, that is less general, if it had allowed for the possibility of persistent current account imbalances. I briefly discuss the dissimilarity between Keynes's and Marshall's views on trade and the similarity, surprisingly, of Keynes's view to those of Marx. The paper concludes with a comment on the contemporary relevance of Keynes's heretical trade theory perspective.

Jesper Jesperson: The Treaty of Maastricht and the Welfare State

The economic argument that further European integration will support the creation of wealth and prosperity is challenged. The starting point is the nature of the Scandinavian welfare state considered as part of the European heritage. The question is considered of how the conditions for the welfare state are influenced by the 'convergence criteria' required by the Treaty of Maastricht for participation in the Monetary Union. According to Maastricht the conditions for establishing the Monetary Union are the fulfilment of financial criteria regardless of the consequences for the real economy or welfare. This has left important societal aspects – such as unemployment, income distribution and environmental effects – unattended. It is argued that the a European welfare index should be established to counter the analytical and empirical bias in the 'European Debate'.

Philip Arestis and Malcolm Sawyer: European Monetary Integration: A Post Keynesian Critique and Policy Proposals

The underlying Keynesian themes of this paper are not only the importance of effective demand for the levels of economic activity and employment but also of creating the institutional arrangements which will be supportive of high levels of effective demand. The first objective of this paper is to scrutinise the case for an Independent European System of Central Banks, which is rejected on the grounds that it would worsen the performance of the real economy. The second objective is to propose an alternative institutional arrangement more conducive to the achievement of high levels of employment. This involves the recognition that monetary and real phenomena are organically linked and a Keynesian alternative to the IESCB has to be based on the general idea that institutional arrangements supportive of high levels of aggregate demand are required to underpin full employment but, at the same time, the supply-side of the economy must be developed to provide sufficient capacity to employ the work force.

IV Roundtable on Theoretical Perspectives

Michael Howard and R.C Kumar: Classical Liberalism in an Environment of Rational Choice involving Commitment and Security as well as Greed

Keynes's General Theory provided a critique of the theory of employment, interest and money in classical liberalism. Post Keynesians have argued that he did not go nearly far enough and that 'a generalisation of the General Theory is required. This paper represents another contribution to this endeavour by focusing on the problems of coordination in an environment where commitment and security, as well as greed, play a role in agents' ratioanal choices. Various reasons are given why voluntary contracting may break down and why less desirable coordination devices, including coercion are likely to be employed.

John King: Some Elements of a Post Keynesian Labour Economics

This paper makes no claim to originality: it is instead a compilation (magpie-like) of some of the insights into the workings of the labour market contributed by Keynes, Robinson, Rothschild, Weintraub, Eichner and others. I begin by separating those variables which are not determined in the labour market (aggregate employment; unemployment; real wages, from those which are, very largely (money wages) or in part (relative income shares; productivity levels; labour force participation rates).

I outline the ideas of some prominent Post Keynesians on the 'micro' issues of trade union wage policy, employer wage policy and the supply of labour. After a discussion of such 'middle range' questions as the structure of wage differentials, and the degree of economic inequality, I move to a discussion of more 'macro' subjects, including the wage and profit shares in GDP, the rate of wage inflation and – via the formation of macroeconomic policy – the levels of employment and unemployment. I conclude by asking what might distinguish a specifically Post Keynesian labour economics from neoclassical, New Keynesian, institutional and radical-Marxian ideas.

Uskali Maki: Is Coase a Realist?

Ronald Coase has been a vigorous critic of conventional neoclassical theory, arguing that it is unrealistic and that a good economic theory has to be realistic. It is pointed out that the attributes 'realistic' and 'unrealistic' appear in three senses at least in Coase: one related to narrowness and breadth, or horizontal isolation (the idea of missing elements and incorporating them); another related to abstracting from particularities or vertical isolation (the idea of blackboard economics and rejecting it in favour of an ongoing process of vertical isolation and de-isolation); and the third related to correspondence with the legal. This does not yet make Coase an advocate of realism as a philosophical doctrine. It is therefore separately argued that each of the three kinds of realisticness is consistent with realism as a view of theories.

George Richardson: Innovation, Equilibrium and Welfare

The process of resource allocation in free enterprise economies is analysed, it being assumed that increasing returns are pervasive and products are generally subject to continuous development. Increasing returns are shown to be compatible with viable competition, partly because of routine innovation of this kind.

There is an explanation of the conditions that have first to obtain, or be created, if firms are to have information sufficient on which to base investment decisions. It is shown that resource allocation is brought about through three modes of coordination; pure market transactions, inter-firm cooperation and inter-firm planning. An account is given of the circumstances in which each of these is appropriate.

Investment in product development takes place throughout the economy in response to an expectation of return, there being a tendency towards a uniform marginal rate. A *dynamic equilibrium* can thus be identified, profits generally tending towards normal through the effect of routine innovation on product life.

Consideration is given to whether the process of resource allocation thus described promotes welfare according to the Pareto criterion. The requirements for efficient allocation are shown to be complex; conditions have to be such not only that the private profitability of investments is in accord with their public benefit, but also that firms can identify profitable opportunities, and that command over resources will pass from the less profitable to the more profitable firms.

V Roundtable on Keynes

Victoria Chick: Keynes's Theory of Investment and Necessary Compromise

The paper rehearses some criticisms of Keynes's theory of investment. These criticisms have distinguished parentage (Kalecki, Robinson, Asimakopulos, Sraffa) and wide currency. They charge Keynes with constructing a theory of investment based on a variety of logical inconsistencies. I argue that most of these criticisms are correct, and that, while no-one ought to be seen supporting logical inconsistency, the root of the problem lies in the necessity of compromise when trying to give microfoundations to macroeconomics in a non-Walrasian world. The paper tries to identify the compromises Keynes made in order to construct his macroeconomics. There is no claim that these explanations were in Keynes's mind; this is a rational reconstruction. There may be better theories of investment – in other words, compromises which you prefer. But I maintain that compromise is necessary, unless you want a Walrasian system, and I suggest that the compromises made were actually quite well chosen

Piero Mini: Keynes's Microeconomics: Some Lessons

This paper starts with some general observations about the distinctive features of Keynes's method. This is then illustrated with respect to his microeconomics and to his attitude toward Joan Robinson's 'below-capacity theorem'. In the latter part the paper suggests a kind of tentative research programme along truly Keynesian lines.

Conventional economics is dominated by philosophical questions like 'what is the nature of prices?' and (implicitly) by the question 'what is the nature of man?' Despite his original work in philosophy, Keynes abandoned this philosophical route and accepted existence at face value. This is why, for instance, he saw man as a mixture of reason and passion, moving away from the strictly rationalistic (Benthamite) view of the homo economicus.

For the same reasons his analyses of markets are outside the mainstream. Keynes wrote many analyses of markets, what may be called his 'microeoconomics'. During the 1920s he studied a dozen internationally-traded commodities. He often studied the market for national and international financial investments, and, in the mid-twenties, the coal and textile industries. A striking thing about these analyses is that Keynes made no use of the tools of the customary theory of value. Demand and supply are spoken of as general quantities traded, without any suggestion of functional relation between price and quantity. There is no notion of equilibrium. There is not even a clear separation between micro- and macroeconomics, as prices are affected by monetary (financial) considerations. Furthermore, psychological matters are given their due, and there is no separation between data and independent variables. The approach, in other words, is that of a gifted trade journal writer guided by experience and common sense. And the source of his data is often replies to questionnaires sent to top merchants!

This conclusion is strengthened if one considers the 'perplexity' with which Keynes greeted Joan Robinson's below-capacity theorem when this was repeatedly called to his attention. He did not understand it because his point of view was not deductive-geometrical and hence neither Marshallian nor Walrasian.

Uncertainty and animal spirits are the twin pillars of Keynes's General Theory affecting liquidity and investments. Both concepts reflect human, non-logical characteristics, concerns, apprehensions, to which economists have paid scant attention. In fact, their restoration to the centre of analysis would call for widespread amendments to the theory of prices. But one must admit that entering the sociological and psychological path that analysis of these concepts entails may produce work of uncertain and tentative value: no 'universal laws' can certainly

spring from such an approach. Nevertheless, the changing nature of many economic relations is ultimately the result of the shifting nature and strength of uncertainty and animal spirits.

Because of the loss of 'vigilance' that followed the overworking of *The General Theory*, the Keynesian model is now as up-to-date as Galileo's telescope. But any overhaul of the model is likely to result only from a general economic crisis. The past twenty years of relatively weak wage increases, of increasing income inequalities, of progressive abandonment of fiscal policy and, lately, of efforts to balance government budgets, seen from a Keynesian point of view should lead exactly to such a crisis.

Sohei Mizuhara: Keynes's Views on Information

John Maynard Keynes attempted to explain how agents behave under uncertainty in A Treatise on Probability and The General Theory of Employment, Interest and Money. This paper examines the ways in which he dealt with information in order to analyse behaviour under uncertainty, and the developmental change between the two books. The premise and weight of an argument are two pivotal concepts of his approach to information in A Treatise on Probability, while the scarcity of information makes it impossible for agents to detect probability and therefore to be guided by it in action under uncertainty. Sparse information in the real world in turn let him adopt the concepts of uncertainty and convention in The General Theory. I argue that Keynes altered his method to approach information as the degree of availability of information changes.

Malcolm Sawyer and Nina Shapiro: Market Structure, Uncertainty, and Unemployment

This paper examines the importance of market structure in the macroeconomic performance of the system. Of special concern are the uncertainties of the system, and the way its markets affect the risks of investors and their liquidity preference. Those risks are shown to increase with the perfection of competition, while its imperfection is seen as the critical requisite of investment. Both the saving (consumption) and investment effects of market structure are investigated, with aggregate demand the focus of the analysis, and the results distinguished from the Walrasian ones of the traditional conception.

PKSG ATTENDANCE DATA, as compiled by Fred Lee

Table 1: Attendance by meeting

| <u>Date</u> | Total | Attended any previous meeting | Attended 1 of last 4 meetings | Non-UK | No. of UK Institutions Represented |
|-------------|-------|-------------------------------|-------------------------------|--------|------------------------------------|
| Feb 93 | 43 | | - | 3 | 20 |
| March 93(1) | 50 | 11 | | 12 | 21 |
| March 93(2) | 36 | 14 | | 4 | 20 |
| Oct 93 | 49 | 24 | | 2 | 20 |
| Nov 93 | 41 | 20 | 20 | 15 | 14 |
| Mar 94 | 43 | 29 | 26 | 4 | 18 |
| May 94 | 41 | 27 | 23 | 6 | 20 |
| Sept 94 | 33 | 22 | 19 | 8 | 17 |
| Dec 94 | 31 | 21 | 18 | 1 | 20 |
| Feb 95 | 26 | 24 | 21 | 3 | 15 |
| Mar 95 | 36 | 26 | 21 | 4 | 16 |
| May 95(1) | 48 | 38 | 35 | 3 | 17 |
| May 95(2) | 60 | 26 | 20 | 11 | 24 |
| June 95 | 30 | 28 | 27 | 3 | 14 |
| Nov 95 | 22 | 17 | 17 | 4 | 9 |
| Feb 96 | 38 | 30 | 24 | 3 | 19 |
| Average | 39.2 | 23.8 | 22.6 | 5.4 | 17.8 |

Table 2
Attendance by UK Institution:

Frequency of 3 or more members of staff attending any of 16 meetings:

| UCL | 11 |
|------------------------|----|
| de Montfort | 10 |
| Leeds | 9 |
| Cambridge | 6 |
| East London | 5 |
| Staffordshire | 5 |
| Queen Mary & Westfield | 2 |
| Guildhall | 1 |
| Manchester | 1 |
| Kingston | 1 |
| North London | 1 |
| South Bank | 1 |
| Stirling | 1 |
| | |

Table 3 Aggregate Institutional Attendance

| Total no. of UK institutions represented | | |
|--|----|--|
| of which old universities | 28 | |
| new universities | 21 | |
| No. of economics depts entered in 1992 RAE represented | 33 | |

Table 4 Aggregate Individual Attendance

| Total number attending 16 meetings | 255 |
|--|-----------|
| Total attending 1 of 16 meetings | 140 (55%) |
| Total attending 2 of 16 meetings | 48 (19%) |
| Total attending 3 to 8 of 16 meetings | 57 (22%) |
| Total attending 9 or more of 16 meetings | 10 (4%) |

Preliminary Announcement

We will be holding a seminar in Cambridge (probably at King's College) on the afternoon of Saturday, January 11 to commemorate the work of Richard Goodwin, who died earlier this year. Speakers provisionally include Geoff Harcourt, Meghnad Desai, Ian Steedman, and Paul Ormerod. This will be followed by a reception, hosted by Routledge, to mark the publication of The General Theory, Second Edition, edited by Geoff Harcourt and Peter Riach. Full details will be circulated nearer the date.

Request for information

We are planning a session, probably to be held at Bath, on non-neoclassical approaches to environmental and natural resource economics. If you are working on these issues and would like to present a paper, please get in touch with Adrian Winnett (A.B.Winnett@bath.ac.uk).

TO CELEBRATE PAUL DAVIDSON'S FESTSCHRIFT

FRIDAY 29 NOVEMBER 1996

UNIVERSITY OF EAST LONDON

| 2.00 pm - 3.15 pm | Roy Rotheim: 'Investment and Pricing in a Monetary Theory of Production: The Theoretical Contribution of Paul Davidson' |
|-------------------|---|
| 3.15 pm - 4.00 pm | Tea/Coffee |
| 4.00 pm - 5.15 pm | Claudio Sardoni 'Paul Davidson: Interpreting Keynes for the World in which we Live' |
| 5.15 pm - 6.30 pm | Sheila Dow: 'Keynes's Philosophy and Post Keynesian Monetary Theory' |
| 6.30 pm - 7.00 pm | Geoff Harcourt: 'Paul Davidson: A Staunch Friend and a Noble Economist/Launching Two Volumes in his Honour' |
| 7.00 pm | Buffet |

The Post Keynesian Economics Study Group is supporting this event and will refund travelling expenses up to the cost of an apex rail fare within the UK (or for shorter journeys on which apex fares are not available, the cheapest alternative rail fare). Apex fares have to be booked at least one week in advance, but since there are only a limited number of apex fares on most routes it is sensible to book well ahead. Please note that as funds are Jimited this level of refund will be strictly adhered to. To help the Group, participants are encouraged to use cheaper means of transport wherever possible or to seek alternative sources of funding for travel.

DIRECTIONS TO THE UNIVERSITY OF EAST LONDON (BARKING CAMPUS)

Those travelling using tube and bus should take an eastbound District Line train, alighting at Barking tube station. You should then catch a number 5, number 87 or number 387 bus to the University - all buses depart at immediately outside the station; all double-deckers go past the University except the 238 and 179. The journey to Barking station from the centre of London takes around 45 minutes, with the bus ride to the University adding an extra 10-15 minutes - assuming normal traffic conditions. Once at the University go to Room 1016 (Conference Centre) where the event will take place.

PKSG NEWSLETTER

Issue 6 April 1997

EDITOR'S CORNER

Greetings once again, particularly to new members on the mailing-list. Do pass the word round to anyone you might think would be interested in the Newsletter, and ask them to send their e-mail number to John Hillard on jvh@lubs.leeds.ac.uk. Also, let me repeat the invitation made some issues ago to all readers to send me Newsletter material: articles, letters, conference details, book reviews, news about themselves and others in whom members would be interested, etc. — preferably to my e-mail address (s.c.dow@stir.ac.uk), or by snail mail to Dept of Economics, University of Stirling, Stirling FK9 4LA, Scotland.

While we're on the subject of e-mail and snail mail, it is becoming increasingly necessary for cost reasons to think of restricting physical mailings only to those who do not have access to e-mail. SO IF YOU HAVE AN E-MAIL NUMBER PLEASE SEND IT TO jvh@lubs.leeds.ac.uk. If you do not have access to e-mail, we will continue to send you a hard-copy version but only if you write to

John Hillard PKSG Leeds University Business School Leeds LS2 9JT UK

There have been several highly successful PKSG activities since the last Newsletter, as shown by the abstracts below of papers presented.

We plan to continue around the following format:

- * annual postgraduate workshops
- * international conferences along the lines of Leeds 1993 and 1996
- * joint participation in seminars and conferences with other bodies
- * PKSG seminars with papers by members and visitors to the UK

With reference to the last activity, please send in any offers and suggestions. In particular, we would welcome offers of papers, information on expected visitors to the UK whom we might invite, and offers of venues for Seminars.

Finally, thank you to all who have sent in material for the Newsletter. Please keep it coming!

Sheila Dow, Department of Economics, University of Stirling.

Why Post Keynesians need fellow-travellers (and viceversa)

The October Newsletter and the Festschrift for Paul Davidson at UEL have seen debates on the pros and cons of a narrow versus wider group of economists coming together under the umbrella of the PKSG. I am in favour of a wider grouping and my arguments are based on the following issues.

1. Issues of analysis

A narrow group will become more and more inward looking and in danger of 'agreeing too much'. This will stifle debate, and will lead to a degeneration of the programme. Controversies, debate, disagreements in the context of wider views and positions are needed if the research programme around the PK approach is to progress. If all this is missing, there is a danger of falling into dogmatism and of taking the suicidal route. This point is made very poignantly by Jan Toporowski in the October Newsletter.

The major economic issues of the 1990s and beyond are linked to globalisation (however that is defined and interpreted) and to technological changes. Neither Keynes nor the PK have much to say on these issues. Neither do many other economists working under different paradigms. We need the contributions and debating power of as many people, particularly young ones, as possible to tackle the issues and problems arising from globalisation and new technologies.

2. Issues of policies

So if a narrow grouping is to be rejected how are we to define the boundaries of the wider grouping? Do we need to define them? Is it not preferable to be as inclusive as possible? Up to a point yes, we should be inclusive. Nonetheless, it is useful to consider what may have been the outlook and ideological positions of the people who – for years – have been prepared to come together under the PKSG umbrella. The main unifying elements seem to me to be the perceived need for economic and social policies designed to alleviate or eliminate the major problems of our society. This came out clearly at the Davidson conference; indeed it was a point made by Paul himself.

The policies agenda is particularly relevant in view of the following. Of the two issues which I consider of great relevance for analysis – globalisation and technological change – the first one is the subject of considerable debate on the policies as well as on the analysis side. The 1980s have seen the triumph of laissez-faire ideological positions which have been, to a large extent, justified on the ground that globalisation is making government intervention unnecessary or impossible. In my view, this position is taken for purely ideological reasons. However, we cannot dismiss it, but we need to challenge it and respond to it with both analysis and policy suggestions. What I am saying is that the issue of policies is of particular relevance at this historical junction: the current structural and technological changes in economic systems are used by the right to argue in favour of laissez-faire, yet we are not, currently, in a position to respond with either analysis or policies. In order to develop our analytical tools and argue for government intervention we need the co-operation of many economists and social scientists in the broad left of centre tradition. Moreover, there is a wide spectrum of economists who are horrified by the economic and social waste of unemployment, by

the widening distributional gap within developed countries and between developed and developing countries. This wide group of economists can find points of commonality around the need for intervention if not around specific policies. They would like - and should be allowed - to come together and make a contribution to the debate.

Of course, policies cannot be thought of in a theoretical vacuum, but they must be related to analyses of the real world as against the metaphysics of abstract theoretical models. If we have many approaches to analysis that is the better for progress towards an understanding of the real world and towards policies designed to change what is repellent about it.

3. The power of PK economists.

Fred Lee's argument about the relevance of finding jobs for new young PK economists is very important. If PK economists cannot find jobs, the group and the programme will gradually disappear. However, this problem is exacerbated by making the group more narrow. There is some power in numbers. A wider PKSG has a higher probability of placing some of its members in academic departments. The former polytechnics (now new universities) have a tradition of accepting bright, unconventional economists.

Grazia Ietto-Gillies

South Bank University

LETTER TO THE EDITOR

12 February, 1997

Dear Sheila.

In your editorial for the PKSG Newsletter in October 1996 you asked for ideas about how the Group should proceed. From my perspective I think its vital that Post Keynesians spend less time focusing on theoretical debates (important though they are) and more time on policy issues. Mainstream economics is extremely influential on policy-making, not only in the UK but in continental Europe, the USA and Japan. If Post Keynesian economists do not engage in policy debates and offer constructive criticism of policy initiatives we are 'opting out' of our academic responsibilities. I enclose a document I produced for our Economics and Public Policy degree. [I regret not being able to reproduce this here - its a bit too long for that - but I suggest you write to Brendan if you would like to see it too - Ed.] It offers a critique of the government's macroeconomic policy from a Post Keynesian perspective. More of this is what is needed if Post Keynesian economists are to make an impact in the real world.

Brendan Sheehan,

Leeds Metropolitan University.

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LEEDS 96 UPDATE

The proceedings of the second international conference on *Keynes, Knowledge and Uncertainty* held at the Hilton Hotel in Leeds, March 1996 will be published as *Beyond Keynes* edited by Sheila Dow and John Hillard and published by Edward Elgar in 1997. The collection will comprise a two-volume set –'letting go is very hard to do!' The contents are as follows:

VOLUME I

Microeconomics and Econometrics

PREFACE
Geoff Harcourt

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Sheila Dow and John Hillard

MICROECONOMICS

- 1 The Division and Co-ordination of Knowledge Brian J. Loasby
- 2 Innovation, Equilibrium and Welfare *George Richardson*
- 3 Realism and Economics: Themes from Coase and Richardson *Uskali Maki*
- 4 Transactions Cost and Uncertainty: Theory and Practice Peter J. Buckley and Malcolm Chapman
- 5 Commitment, Security and Greed *Michael C. Howard and R. C. Kumar*
- 6 Keynesian Microeconomics Athol Fitzgibbons
- 7 Keynes's Microeconomics: some lessons *Peter V. Mini*
- 8 Keynes and Imperfect Competition Nina Shapiro and Malcolm Sawyer

ECONOMETRICS

- 9 The Role of Econometrics in a Radical Methodology Bill Gerrard
- 10 Post Orthodox Econometrics Paul Ormerod

- 11 How do Economic Theorists use Empirical Evidence? Roger E. Backhouse
- 12 Conflict in Wage and Unemployment Determination Philip Arestis and Iris Biefang
- 13 Realism, Econometrics and Post Keynesian Economics Paul Downward

Volume II Post Keynesian Perspectives

INTRODUCTION

Sheila Dow and John Hillard

KEYNES

- 1 Keynes's Theory of Investment and Necessary Compromise Victoria Chick
- 2 Keynes's View on Information Sohei Mizuhara
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UNCERTAINTY

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- 6 Trust, Time and Uncertainty Vicky Allsop
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- 8 Organicism, Uncertainty and 'Societal Interactionism': a Derridean Perspective Man-Seop Park and Serap Kayatekin

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- 9 The Treaty of Maastricht and the Welfare State Jesper Jesperson
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John Hillard

SEMINAR ABSTRACTS

Post Graduate Workshop University of Leeds 1 November 1996

Mario Garcia (University of Cambridge): 'The Substitution debate (1932-1935) and the features of money in chapter 17 of the *General Theory*'.

What are the features of money that make its rate of interest so special in the determination of output and employment? The usual textbook properties of money (divisibility, large value in small quantities and so on) were replaced in *The General Theory* by two new features: money has a zero or near zero elasticity of production and a zero or near zero elasticity of substitution. While Keynes worked more on the elasticity of production in the chapter 20, there was no further discussion of the elasticity of substitution. Probably, one of the reasons not to develop the concept was that it was embedded in a debate familiar to the contemporary readers, but not to us.

The notion of elasticity of substitution was introduced by Hicks in *The Theory of Wages* (1932), where he analysed the distribution by means of a neoclassical production function. The concept was independently discovered by Joan Robinson (*The Economics of Imperfect Competition*, 1933) and a polemic started about the meaning, use and applications of it that involved Richard Kahn, Abba Lerner, Paul Sweezy and Piero Sraffa, among others. Some elements of the 1950's and 1960's capital theory controversy were already discussed at this early stage. With the substitution debate as a point of reference, the paper explains some implications of Keynes's argument. In particular, an economy that introduces these features will have several possible long-period unemployment positions.

Guiseppe Fontana (University of Leeds): 'Some notes on the monetary debate within the Post Keynesian school'.

This paper attempts to provide an insight into the monetary debate within the Post Keynesian school. The source of the controversy concerns the interest elasticity of the money supply function and its level of dependence on the money demand function. We use a monetary circuit, which describes a sequential economy, to conciliate these different views on money. This framework provides a way of combining the roles of money as purchasing power (money flow), and as a store of wealth (money stock) within a single model.

Genny Scarfiglieri (University of York): 'Size and efficiency in the production structure of the Italian banking system'.

This paper examines the production structure of the Italian banking system, through an analysis of productive efficiency and economies of scale. To this end a translog cost frontier is estimated on a sample of 423 Italian banks observed in 1993. Using a more complete specification of the variables involved in the econometric estimation, we find completely different results from those of other papers. In particular, we find that the general level of inefficiency is about 8%, with big banks being more efficient than smaller ones, and that big banks experience economies of scale while smaller banks experience diseconomies of scale.

Stephen Dunn (University of Leeds): 'A Post Keynesian contribution to the theory of the firm'.

This paper aims to make a positive contribution to the development of the theory of the firm and Post Keynesianism. From a Post Keynesian perspective we examine the recent contributions on the contractual theory of the firm by Dahlman, Langlois, Hodgson and Cowling and Sugden. We focus on Cowling and Sugden's novel definition of the firm as 'a means of co-ordinating production from one centre of strategic decision-making'. Our discussion yields an extension to this definition that accounts for the fact that strategic decision makers engaged in the co-ordination of production operate under conditions of 'fundamental uncertainty', themes evident in Knight and Coase. The significance of such an extension is threefold. Firstly such considerations reinforce Cowling and Sugden's main conclusions while making explicit the informational basis of the firm and the need for strategy. Secondly it facilitates a more adequate treatment of the role of money in production, a feature underdeveloped in the orthodox literature on the contractual theory of the firm. Thirdly by directing focus onto uncertainty. money and power in production, our definition of the firm brings together central themes from the Keynesian and Kaleckian traditions of Post Keynesianism. This amounts to an novel contribution to both the theory of the firm and Post Keynesianism.

Karl Taylor (Open University): 'A modelling strategy for assessing the determinants of within industry wage inequality'.

The analysis starts from considering the issue of wage relativity's a topic of concern to both Kalecki and Keynes, and considers the possible causes of growing earnings inequality. In recent years inequality has risen both in the UK and the USA, and such dispersion has not only occurred between industries but also within industries, with the majority of the shift occurring within industries and establishments. The research sets out an empirical methodology to analyse such within industry changes in wages, based upon a two step approach. The first step involves using individual level data to control for human capital characteristics using standard Mincer wage equations. controlled for such human capital the resulting variance of the residual will represent within industry inequality (Machin 1996). The approach I take attempts to explain this within group component in terms of demand, supply and institutional change. This take place in the second step of the analysis where a pure time series approach is taken to see

which of the potential causes of within industry inequality dominates, by applying the Johansen Maximum Likelihood technique for Cointegration. The results will add an important element to the existing research, since currently evidence is available for both demand, supply and institutional change effects, but no one has attempted to build a framework to consider the relative importance of each influence simultaneously.

Seminar: University of East London 29 November 1996

Roy J. Rotheim: 'Investment and Pricing in a Monetary Theory of Production: The Theoretical Contribution of Paul Davidson'.

This paper demonstrates how Keynes thought of neoclassical economics as founded on illogical structures. By employing a Post Keynesian perspective, the paper embraces Keynes's criticisms and proceeds to ask the more realistic question, not about price flexibility, but rather about the extent to which prices increase at slower or faster rates. The New Keynesian tradition envisions price inflexibility at the level of the firm, while questions of rates of change in prices remain a matter of the exogenous growth of the money stock. But Post Keynesians question such price changes also in terms of the price-setting behaviour of the industry as a whole. By not embracing the Classical dichotomy between the real and monetary sectors, Post Keynesian models consider all questions of prices to be situated at the place where they are set, i.e. the level of the firm itself. thinking about price setting in this fashion embraces questions of decisions to access finance externally, credit market conditions reflecting rational decision making under uncertain conditions by financial institutions (including banks) and the role played by monetary policy in light of such pricing and credit market decision making. It is shown that the extent to which prices increase at slower or faster rates, during an economic downturn, depends upon: firms' abilities to control the mark-ups over unit cost; the response of financial institutions to increases in the demand for money as means of payment by firms who find that they must continue to repay debts set in money terms despite unexpected shortfalls in sales revenue; and the extent to which central banks recognise their role as lender of last resort under such circumstances.

Claudio Sardoni: 'Paul Davidson: Interpreting Keynes for the World in which we Live.'

Starting from the paper written with Geoff Harcourt, which compares Davidson's, Moggridge's and Skidelsky's interpretations of Keynes, I argued that Paul is not a historian of economics but an economist who tries to apply Keynes's theory to the understanding of the real world. Post Keynesians should follow his example by being more interested in policy and less involved in sterile discussions on the truest interpretation of Keynes. As an aside, I also made some observations on the need for PKs to have a reformist approach to the society rather than an allegedly revolutionary one. The occasion for these observations was the fact that nowadays most Post Keynesians seem to spend most of their time to attack Keynes for being a liberal and a reformist rather than a mixture of Marx and Kalecki.

Sheila Dow: 'Keynes's Philosophy and Post Keynesian Monetary Theory'

The interdependence of Keynes's philosophy and his monetary theory is evident in Paul Davidson's work. The purpose of the paper is to focus explicitly on the connections between the two, taking Davidson's contributions as a starting-point. The close connection between uncertainty and liquidity preference has been drawn out further by the recent Keynes's philosophy literature; the current state of thinking is outlined here, focusing on the shift of emphasis from the speculative demand for money to the precautionary demand. Recent work has been emphasising the interrelationship between the supply of credit and liquidity preference, by focusing on banks' own liquidity preference. The connections between these ideas and Keynes's monetary theory are drawn out here. Explicit treatment is then offered of how the theory of credit creation, as an application of liquidity preference theory, has its foundations in Keynes's philosophy in general and his theory of uncertainty in particular. An account is given of how the recent Keynes's philosophy literature has taken Keynes's theory of uncertainty further, and what implications this has for the theory of credit creation.

Seminar University of Cambridge 10 January 1997

Ray Petridis and John Hatch: 'A Cambridge Economist but an Australian Patriot'.

This paper begins and ends with a tribute to Geoff Harcourt for the large and distinguished contribution he has made to teaching and research in economics and especially emphasises the love and respect held for him by countless students and academic contemporaries. A brief description of his distinguished undergraduate years at Melbourne University and his study for a Ph.D. at Cambridge is followed by a detailed examination of his career as lecturer, reader and professor of economics at Adelaide University. His important contributions to and influence on Australian economic policy are demonstrated. Despite his permanent departure to Cambridge University in 1981 Geoff Harcourt's academic, political and personal links with Australia are shown to be as strong and abiding as ever.

Maria Christina Marcuzzo: 'Joan Robinson and the Cambridge Tradition'

Joan Robinson's association with three Cambridge 'revolutions' - imperfect competition, effective demand and capital theory - is examined in the context of her personal and intellectual partnership with R.F. Kahn, J.M. Keynes and P. Sraffa. Initially, imperfect competition appeared to have successfully extended marginal analysis to all market forms. It also allowed Richard Kahn and Joan Robinson to persuade Keynes to present the main argument of the General Theory in terms of aggregate demand and aggregate supply. By the early fifties, however, Joan Robinson rejected the Marshallian methodology and became a strenuous censor of neoclassical theory. In this paper the origin of her critique is traced to her reading of Sraffa's Introduction to Ricardo's Principles. Ian Steedman, Welfare Economics and Robinson Crusoe the Producer The welfare of almost all employed people is significantly affected by how they spend their working hours - and not just how long they work and what

they purchase with their earnings. Yet this brute fact is all but ignored in welfare economics! It is shown here, in a very simple way, how sharply the familiar results of welfare theory are changed once this glaring omission is rectified.

Victoria Chick: 'Equilibrium in the General Theory'.

Both in A Treatise on Money and in the General Theory Keynes sought a theory which would hold in both equilibrium and disequilibrium, and in the latter book also a theory which would acknowledge the uncertainty of an unknown future. In the General Theory Keynes created a dynamic, open system with static solutions. This combination was necessary, for the open system tells us nothing definite about the trajectory of the system, although given expectations, there is at any point a determinate outcome, in or out of equilibrium. By contrast, in the 'maintained method' of the mainstream, the determination of the values of variables is identified with equilibrium and both are identified with market clearing. The combination of an open system, uncertainty and equilibrium has led to misinterpretation both by those wedded to market clearing equilibrium and by those who adhere to the idea of the classical long run.

Seminar University of Cambridge 11 January 1997

Geoff Harcourt: 'Richard Goodwin: An Appreciation'.

Richard Goodwin died on 6 August 1996 aged 83. He had been a Professor of Economic Science in Siena since 1980, following careers at both Harvard and Cambridge. He became a Marxist at Harvard, but left the Communist Party after the Hitler-Stalin pact. He retained a humane, progressive commitment to planning a more just and equitable society than unfettered capitalism could provide. His deepening understanding of economic systems was influenced by Marx, Wicksell, Keynes, Schumpeter, Kalecki, Harrod, Leontief, Joan Robinson, Sraffa and Kahn. As a Rhodes scholar at Oxford, Goodwin wrote a B.Litt thesis on money supply control which convinced him to analyse cycles in real terms. Returning to the US, Goodwin obtained a PhD and taught at Harvard. Here, influenced by Schumpeter and Leontief, he worked on input-output analysis and on the impact of technical progress. At the suggestion of Richard Stone he came to Cambridge, in 1951. An important staging-post was his seminal paper on 'A Growth Cycle', written for the 1967 Dobb Festschrift, which indissolubly fused cycle and trend. Then in Siena he brought together strands of thought from his earlier work to put forward his vision of the nature of capitalist development, published in The Dynamics of a Capitalist Economy (written jointly with Lionello Punzo).

Ian Steedman: 'But Values DO Follow a Simple Rule!'

Values do follow a very simple rule as the rate of profit varies, provided only that the system is square. Neither single production, nor semi-positive (v, H), nor regularity a la Schefold need be assumed.

Paul Ormerod: 'Richard Goodwin: Capitalism, Profits, and Dynamic Systems'.

Richard Goodwin's growth cycle paper offers what is obviously a dramatic simplification of a capitalist economy, yet in a mere half dozen pages covers the following themes:

- * The two key factors which distinguish capitalism from all other economic systems are sustained growth in the long-term, and the existence of fluctuations around the trend rate of growth. Goodwin's paper gives an economic explanation of both these phenomenon
- * The paper focuses explicitly on the distribution of national income between profits and wages as the source of both long-term growth and the economic cycle. Goodwin's paper restores the importance of profits to the understanding of capitalism
- * The existence of a limit cycle in the model offers a different concept of equilibrium to that of conventional economics. Instead of the idea of a unique equilibrium point, for example, the perspective of equilibrium which the paper gives is of a distribution of the amount of time which the system spends in various states
- * There is no guarantee in the model that the labour market will clear. In other words, no assumption is made that the average rate of unemployment over time will be low
- * The paper draws attention to the importance of initial conditions and hence, implicitly, to path-dependence and the role of economic history. The position of the limit cycle in profit/unemployment space is determined entirely by initial conditions, so that two economies whose average growth and unemployment rates were identical could nevertheless experience quite different histories in terms of cyclical fluctuations
- * Methodologically, the paper points the way to the use of dynamic systems techniques to the understanding of the dynamic process of capitalism. In this respect, the paper was years ahead of its time
- * Finally, the paper offers a political theory to account for the successful absorption of the working class by capitalism

It is easy to forget in the mid-1990s that it was only relatively recently in historical terms - perhaps as late as the 1960s in Europe - that the capitalist market economies showed that they offered a decisively superior form of economic organisation. Goodwin's paper gives an account of why, even in a system in which labour and capital were mutually antagonistic, the two could nevertheless remain locked together in a symbiotic relationship.

Meghnad Desai: 'Keynesian and Classical Models of Capitalism'.

Richard Goodwin was a 'lifelong but wayward Marxist'. His principal research topic was the disequilibrium dynamics of the capitalist economy. In the micro-economic aspects of his work, he explored the usefulness of linear systems in, for example, theorising about a variable dynamic multiplier (1949), as well as generalising Sraffa's notion of standard commodity to multiple standard commodities (1976). He extended the Hicksian trade cycle by embodying it formally in a multiplier-accelerator model with a non-linear investment relation (1950, 1951).

His best-remembered and most seminal work is his formalisation of Marx's Theory of Growth Cycle (1967). This led to a number of extensions and developments in theoretical, as well as empirical studies (Goodwin et al, 1984). In some ways, Goodwin's revival of the classic Voltera-Lotka predator-prey model coincided with, if not reawakened, interest in structurally unstable dynamic systems which then led to catastrophe and chaotic dynamics. His last major work was undertaken jointly with Lionello Punzo: The Dynamics of a Capitalist Economy: A Multisectoral Approach. It brought together the microeconomic/structural elements of a linear system with the macroeconomic non-linear dynamics of unstable systems (Goodwin and Punzo, 1987).

Although he started his academic career with a dissertation on money supply, the monetary/financial side is ignored in Goodwin's dynamics. The time may have come to integrate a Minsky Financial Crisis Theory with Goodwin's non-linear dynamics.

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Notices

ROPE Conference, 28-31 July 1997, University of Trier, Trier, Germany Keynote speaker: Victoria Chick. For further details, please contact Steve Pressman, Monmouth College, US, tel: (908) 571-3658, e-mail: pressman@mondec.monmouth.edu

Conference in Honour of Brian Loasby, University of Stirling, 26-8 August 1997. For further information contact Sheila Dow, Dept. of Economics, University of Stirling, Stirling FK9 4LA. Tel: (01786)467474; Fax: (01786) 467469; e-mail: s.c.dow@stir.ac.uk

EAEPE Conference, 6-9 November, 1997, Panteion University of Social and Political Sciences, Athens, Greece. The Conference Programme Organiser is John Groenewegen and the 1997 Conference Local Organiser is Stavros Ioannides, Panteion University of Social and Political Sciences, 136 Syngrou Av., 176 71 Athens, Greece. Telephone 30 1 92 98 086. Fax 30 1 92 23 690. Email stioan@mhsgw.panteio.ariadne-t.gr. Participants wishing to submit papers are invited to send a title with a 400-600 word abstract to John Groenewegen (Department of Economics, Erasmus University, PO Box 1738, 3000 DR Rotterdam, The Netherlands. Telephone: 31 10 408 1383. Fax: 31 10 452 5790. Email groenewegen@eov.few.eur.nl).

PhD Scholarships at the Institute for German Studies, University of Birmingham: For further details, contact Jens Hoelscher on J.Hoelscher@bham.ac.uk Leeds University Business School

Second Annual Post-Graduate Conference

Call for papers

The Second Annual Post-Graduate Conference at the Leeds University Business School will take place on 7th November 1997. The conference aims to provide post-graduate students with an opportunity to present their current research. Papers are invited in the broad areas of Monetary, Labour and Industrial Economics. Both orthodox and nonorthodox approaches are welcome and papers with a non-technical content will not be discriminated against. Conference submissions should take the form of an abstract of 1000 words and be sent by September 1st 1997.

For further information please email Giuseppe Fontana (ecogf@leeds.ac.uk)

or write to:

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> jvh/lubs/uk 15 April 1997

PKSG NEWSLETTER

Issue No. 7

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Editor's Corner

Sheila Dow (s.c.dow@stir.ac.uk)

Greetings to PKs everywhere. Please accept my apologies for the long gap since the last *Newsletter*. This is evident from the long list of abstracts below from the various PKSG events which have taken place since the last *Newsletter*.

Our activities lately have been different from the previous emphasis on seminars in London featuring visiting scholars, with more of an emphasis on joint ventures. These joint ventures have been very successful. But an influential factor has been the relative lack of funds. We have devoted whatever funds have been available to paying Apex fares for graduate students. We continue to operate without ESRC funding. This year, this was inevitable given a logistical impediment in Leeds, where the application was to have been made — an impediment outside the control of those intending to make the application. But there are definite plans to apply again next year.

In the meantime, the mailing list is now being transferred to Leeds, under the care of John Hillard. From now on, mailings will be exclusively e-mailings, unless you do not have access to e-mail – in which case, if you have not already done so, please write to John so that he knows to send you hard copy (address: Leeds University Business School, 11-15 Blenheim Terrace, Leeds, LS2 9JT). Anyone who specifically requests hard copy because they do not have access to e-mail will be sent it. But our plans for the future are very much coloured bythe use of electronic means of communication.

Adrian Winnett has let it be known that he would like to pass on the responsibility for organising seminars, as well as for the mailing list. He will continue to be involved in the PKSG as we plan future developments, so we will still benefit from his experience. I wish to take this opportunity to express heartfelt thanks to him on behalf of you all. He has devoted tremendous efforts over many years to the PKSG, and we all owe him an enormous debt of gratitude.

As PKSG evolves, the following plans have emerged as the best way to proceed:

- the Newsletter will be replaced by a monthly Bulletin administered by John Hillard (e-mail: jvh@lubs.leeds.ac.uk). A monthly mailing will allow for more frequent exchange of ideas than in the past, so please send in short 'thought' pieces, reactions to others' ideas, etc, to John
- anyone organising an event which might interest other members of the mailing list is invited to send a notice to John for it to be placed on the *Bulletin Board*
- there will be a concerted effort to re-institute London-based seminars on a more regular basis, featuring visiting scholars as well as UK-based ones. The Department of Economics at Middlesex University has kindly offered to organise and host these seminars; we are particularly grateful to Vicky Allsopp and Eleni Paliginis for their offers of assistance. During the transitional period, offers of papers, information about visiting speakers etc should continue to be sent to Adrian Winnett (A.B.Winnett@bath.ac.uk)
- depending on our financial situation, only a narrow range of activities can be given
 any financial support from the PKSG (in the form of travel assistance for graduate
 students) these would primarily be the 'core' activities: London seminars, the Leeds
 conference and the Leeds postgraduate conference.

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Letters to the Editor

From Fred Lee, de Montfort University, June 1997

In his letter in the last issue of the Newsletter, Brendan Sheehan advances the theme that Post Keynesians should spend more time on policy issues. If by theoretical debates, he means theoretical debates over neoclassical economics, then I do agree; but if he means debates over Post Keynesian theory then I do not agree. Instead of posing the issue as Brendan has, I would argue (1) that Post Keynesian economic theory needs to be further developed and empirically grounded and (2) that Post Keynesians need to develop economic agendas/policy based on their theory. In posing the issue in this manner I am not valuing theory creation above agenda/policy development or vice versa - both need to be done, and done in a cooperative manner. Moreover, I have made agenda/policy as neutral as possible so as not to impose a specific political agenda on Post Keynesian economics. Some Post Keynesians accept capitalism and just want to make it work better and be nicer; whereas other Post Keynesians would like to see capitalism destroyed and replaced with a socialist commonwealth. Developing 'relevant' economic policies and entering into existing policy debates with the mainstream political parties would be an agenda item for the social democratic Post Keynesians whereas they would not be for the anti-capitalism Post Keynesians. On the other hand, the concerns of the latter may be to develop Post Keynesian economic theory and then to use it to show that capitalism can never have a nice face. The pluralism which has enriched the development of Post Keynesian economic theory should also enrich its economic policy/agenda developments - but this requires that Post Keynesians take positive steps to maintain a diversity of Post Keynesian social/political visions.

From Per Gunnar Berglund, Stockholm, December 1997

When I was taught economics (briefly, in the eighties), we were fooled to believe that for Keynes 'money didn't matter', he 'didn't take expectations into consideration', and so on. All in all, the impression was conveyed that Keynes was something of an idiot, who was simply 'wrong'. You may understand how surprised I was when I took myself the liberty to read Keynes's *General Theory* in my second term. It was at that very point in time that my real interest in economics began – and my career as an academic economist went down the tube!

Subsequently, I have been studying a great deal of history of economic thought on my own, and one of my conclusions is that the misrepresentation of Keynes seems to be part of a political project, led by conservative economists and their business allies, of weeding out the ideas of Keynes and indeed the public consciousness of the possibility of maintaining full employment and a decent distribution of our social boons. It is my conviction that economics should deal with social problems, with the problems of unemployment and under-employment, and of maldistribution and economic mismanagement in general. I feel this is the mainspring of the great Cambridge tradition of Malthus, Marshall and Keynes, but also of many neoclassical economists, e.g. Wicksell, Fisher, Pigou and others.

I believe that the struggle for an improved understanding of Keynes and economics in general is very important indeed. When reading the writings of the Post Keynesian tradition (which I have come to be quite familiar with), I find myself in full agreement with the 'psychoanalysis', if I may say so, of the capitalistic system. I think this hermeneutical insight-based approach is of immense importance and of great value for our ability to make good policy prescriptions. As in good psychoanalysis, the chief aim of the analyst should be to improve the well-being of the patient. Herein, however, lies a piece of criticism.

What I regret is that so few Post Keynesian economists take an active role in giving policy advice. Sometimes I cannot help getting the impression that the analysts are setting their own insights and their own personal development (in a psychological sense,

i.e. getting the world around them to make sense) before the patient's health. There are some recurring themes in Post Keynesian writings, which seem to end up in a kind of cul-de-sac, where the analyst can hide himself from some of the moral responsibilities a good economist should have, and which all good economists throughout the history of economic thought do seem to have displayed.

I have in mind the notion of 'uncertainty' in particular. Post Keynesians rightly say that the world is (radically) uncertain, and that there is often very little ground for probability calculus. Keynes used this to ridicule the business decision-making making use of the 'pretty, polite techniques', employed in 'well-panelled board rooms'. Still, decisions have to be made, even in the face of uncertainty, and even if this means letting our 'animal spirits' take the lead. It seems to me that the Post Keynesian insights about the awkward and precarious nature of life and business have the tragic effect of killing the animal spirits, so to speak, of these fine economists.

Of course, there is a particular temperament in academia, which differs radically from the entrepreneurial 'damn the torpedoes, full speed ahead' of business. Still, I regret the lack of any sentiment of rashness among many Post Keynesians. Post Keynesians are the best and most sensible economists around. Why shouldn't they be engaged in serious advisory activities? After all, Keynes himself never hid in his study!

Another of these concepts sported by Post Keynesians is 'organicism'. I think it is perfectly right to hold that Keynes was an organicist in part. But he never made his organicism an obstacle to giving advice. It is also true that a truly organic system cannot be reduced to atoms. But does this help us in our practical aiming at social improvements? I doubt it. The core of what I am trying to say here is that we should be careful not to invoke concepts and notions which hinder ourselves. In the end, the *raison d'être* of economics is to improve society. Concepts and notions of economic analysis should always be assessed in the light of this ultimate motive. Insofar as they help, if only very indirectly and vaguely, we should make use of them. If they don't help, but lead us into that dead end street of inaction, we should relegate them to the footnotes where they belong. The relevance of analytical tools should be assessed in terms of their usefulness in making the patient feel better.

After having read a great deal of Post Keynesian and other Keynesian literature (even some 'New Keynesian', which is a strange labelling of a theory which seems neither new nor Keynesian to me), I still feel most kinship with the 'Old' Keynesians, people like Tobin, Modigliani and Eisner. Not because they are theoretically more 'right' than the Post Keynesians, but because they never lose sight of the crucial role of economics as a tool to improve society. Their tools may in some respects be less sharp than the Post Keynesian ones, but great handicraft has been flowing in a steady stream from their workshops, while many of the Post Keynesians seem to have left their excellent tools on the shelf. So, even after trying out the arguments against it, I find the old 'lever-pulling' kind of Keynesianism tremendously attractive, since it works and it helps.

Let me end this letter by suggesting more co-operation between 'Old' and 'Post' Keynesians. (I am really not at all pleased with that 'Post' epithet – Keynesian is perfectly fine with me.) I think many of the lever-pullers of the Old School would have much to learn from going through some courses in psychoanalysis, and the Post Keynesian psychoanalysts would benefit a great deal from stepping out of their armchairs and help scaring our dormant economy off that Freudian sofa. But above all: there is no reason for splitting the Keynesian paradigm into several sub-schools, each fighting one another more effectively than fiscal and monetary conservatism is being fought altogether.

True there is a lot of politics in this, but then let us not forget that economics is essentially a moral science. Shouldn't our common conviction about the right to good government, meaning full employment and a fair income distribution, overrule the minor quibbles about the means by which this may be brought about?

ABSTRACTS

CONFERENCE ON THE POLITICAL ECONOMY OF CENTRAL BANKING, 16 May, University of East London.

H.-Peter Spahn, University of Hohenheim, Stuttgart (FRG) e-mail: spahn@uni-hohenheim.de

Leadership and Stability in Key Currency Systems: A simple game-theoretic approach

The purpose of this paper is to analyse some basic and interrelated problems of the working of a key currency system. As a general framework of the discussion a simple two-country model is chosen where the active part is played by the interaction of central banks. The first question is how leadership by some country is established and why other countries accept their subordinate position. Two approaches which might cause a systematic asymmetry in the relations between similar economies are investigated: A model presented by Eichengreen highlights different market structures, particularly with respect to money demand; the fact that sterling assets were used as a secondary reserve in the gold standard however did not suffice to constitute a stable key currency structure. Instead it is shown that economic policy preferences with respect to the targets of monetary policy are the decisive factors and that the key currency central bank acts as a Stackelberg follower in terms of game theory. Whereas leadership in the gold standard depends on the priority attached to the preservation of external equilibrium at given exchange rates, the emphasis laid on price stability determines the currency which is chosen for intervention and reserve keeping purposes in paper standard systems like the EMS. The next question is how the welfare of member countries is affected by supply and demand shocks which emanate from the leading country. In this scenario, it is argued that paper standard currency systems differ substantially from the classical gold standard as they exhibit a marked restrictive bias. This approach offers some further reason for the evident instabilities of the EMS in the past years.

Ilene Grabel, Graduate School of International Studies, University of Denver, Denver, CO 80208, USA (igrabel@du.edu)

Coercing Credibility: Neo--liberal Policies and Monetary Institutions in Developing and Transitional Economies

The criterion of "policy credibility" is invoked today as a means of privileging neo-liberal economic policies and independent monetary institutions (namely, autonomous central banks and currency boards) in developing and transitional countries. The paper demonstrates that the credibility criterion is fundamentally anti-pluralist and anti-democratic. The

paper argues that the criterion of policy credibility presents a formidable obstacle to dissent and to serious consideration of any non-neo-liberal economic programs. This criterion has also been used to promote non-representative monetary policy-making institutions. The paper argues that proponents of the credibility criterion fail to recognize that policy credibility is always secured endogenously through political and economic power rather than exogenously through the inherent properties of economic theory. The paper concludes by suggesting two alternative criteria by which policy regimes and the governance structure of monetary institutions could be adjudicated. These alternative criteria are termed the 'principle of democratic credibility' and the 'principle of fallibility'. Together, the adoption of these two principles would entail public debate over the distributive consequences of different types of macro-policies and institutional structures, something which is generally lacking as a criterion for policy evaluation today.

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The Independence of Central Banks. The Case of Italy A greater independence of the Central Bank has long been a request of Italian industrial circles. The Bank of Italy has often been accused of having channeled liquidity to Government bonds, thus bringing about an almost complete atrophy of the financial markets. More recently left-wing parties have been supporting the same request, mostly because the Bank of Italy is considered to be a most serious institution, immune from corruption, capable of resisting pressures coming from political parties. In fact, the Bank of Italy has pursued at the same time a policy of monetary and financial stability, often privileging the second target whenever serious bankrupts in the banking sector were feared. In one case a clear divergence between Bank and Cabinet emerged. This was in 1978 when the Bank, led at the time by Governor Baffi, tried to make full use of its power of controlling commercial banks. At the same time, the Bank pointed out the dangers of participating in EMS. In that case, the Governor was finally forced to resign. In fact in a small open economy like Italy, monetary policy and foreign exchange policy are strictly connected, which makes a full independence of the Central Bank hardly conceivable.

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Wicksellian Norm and Macroeconomic Performance: The Canadian Experience with Zero-Inflation Policy
The object of the paper is to show that, historically, both economists and policy makers have generally subscribed to variants of what can be generically described as the Wicksellian norm of price level stabilization which necessarily assumes a certain degree of endogeneity of the money supply. The basic Wicksellian norm is to raise the bank rate when prices are rising and to reduce it when prices are falling.

Canadian monetary policy since the 1970s has been following a hybrid version of this original Wicksellian policy, with the empirical consequences that both real interest rates and unemployment rates have been pegged at inordinately high levels during the last two decades.

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New Zealand's Experience with an Independent Central Bank Since 1989

Section I of this paper describes the way in which the Reserve Bank of New Zealand has autonomy to formulate and implement monetary policy subject to stringent accountability requirements based around a Policy Targets Agreement. Section II explains how the failure to achieve the Bank's target midpoint of 1.0 per cent in the underlying annual CPI inflation rate, together with the costs imposed on the tradeables sector by a tightening of monetary conditions in 1995 and 1996, created a political environment in which the inflation target was relaxed to 0-3 per cent. In Section III, it is suggested that this step represents a cautious acceptance by New Zealand policymakers that a small amount of anticipated inflation may not cause as much harm to the economy as the costs of achieving strict price stability. Section III also analyses the role played by exchange rate appreciations in achieving a predetermined CPI inflation target in a small open economy, and draws attention to the need to better understand the relationship between monetary policy and domestic non-tradeables inflation, along the lines being developed in the Post Keynesian research programme in monetary economics.

Sheila Dow, University of Stirling (s.c.dow@stir.ac.uk) and Carlos Rodriguez Fuentes, University of La Laguna (cjrodrig@ull.es) The Political Economy of Monetary Policy

The purpose of this paper is to consider the meaning of, and possibilities for, monetary policy in an endogenous money framework. This contrasts with the neo-classical identification of monetary policy with money supply control. While the horizontalist endogenous money approach sees monetary policy in terms of interest rate setting, we consider a combination of endogenous money and liquidity preference theory which gives monetary policy a much more complex role. Further, it is argued that this role is contingent on context. First, interest rates themselves may only be subject to central bank influence rather than control. Second, central bank interventions may have their greatest influence on expectations, about interest rates, or more generally about liquidity. Third, there is an interdependence between central bank intervention in markets to influence interest rates or liquidity, and prudential regulation of the banking system. In all of this, the possibilities open to the central bank depend on the state of expectations and

liquidity preference. They also depend crucially on the stage of banking development.

CONFERENCE IN HONOUR OF BRIAN LOASBY, STIRLING, 26-28 AUG 1997

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Rationality, Entrepreneurship, and Economic 'Imperialism'

The usual basis for the thesis that explanation in all social sciences can be subsumed under economic theory (a thesis which Brian Loasby has criticized), is the assertion of the universality of rational choice. This paper shows that, indeed, the assumption of rational choice (as understood in mainstream economics) does lead to the above conclusion. However it is also shown, paradoxically, that, according to the Austrian-Mises concept of rational choice, the universality of rational choice leads to precisely the opposite conclusion. This is because, as stated by Gary Becker and by Jack Hirshleifer, the 'imperialist' position rests also on the assumption of universally attained equilibrium. Now the paper does show that, interpreted in mainstream terms (in which 'rationality' means, in effect, full awareness of all circumstances relevant to choice), the rationality assumption does strictly imply alreadyattained equilibrium. However the paper also emphasizes the unrealism of the assumption that choice is always undertaken with full awareness of relevant circumstances. In a world of open-ended uncertainty this assumption becomes highly artificial. The Austrian-Mises idea of rational human action includes explicit note of the 'entrepreneurial' element in choice (ie the element which grapples with the open-ended uncertainty of the real world). It is therefore precisely the universality of the notion of rational choice (in the Mises sense which includes this entrepreneurial element) which suggests the inapplicability of equilibrium-theorizing in areas outside the market context (in which such theorizing was developed in economics). This follows from our understanding that the relevance of the equilibrium notion in standard economic theory derives from the power of the tendency for entrepreneurs to profit from the opportunitiescreated by the presence of disequilibrium conditions in markets. But this tendency has no place outside the market context.

Outside the market setting *economic* theory provides no basis for asserting any equilibrium notion – let alone for asserting universally-attained equilibrium. To the extent that economic 'imperialism' rests on the equilibrium assumption, it is precisely the universality of Misesian human action which undermines any basis for such 'imperialism'.

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Learning in Evolutionary Environments

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Equilibrium and Learning: Loasby's View and the Subjective Probability Approach

Generally, the growth of knowledge is modelled according to the Bayesian rule of learning whereby an adjustment programme makes sure that new information is incorporated into existing knowledge. Alternatively, knowledge is assumed to be given at any moment in time and no attempt is consequently made to model its growth.

Brian Loasby has made clear that neither approach is satisfactory. On the one hand, the Bayesian rule implies that knowledge grows according to predetermined rules without any scope for individuals' autonomy. On the other, the assumption that knowledge is given at any moment in time implies full autonomy, but no explanation and no continuity in the growth of knowledge. In order to explain the growth of knowledge without depriving the individual of its autonomy a different approach is needed. The argument put forward in the paper is that the subjective probability approach satisfies that need, in that it provides a framework for explaining the growth of knowledge, without predetermining the way new information changes knowledge.

The argument revolves around the notion of conditional probability. Any probability distribution over the states of the world is defined according to some existing body of knowledge, that is, is conditional on some prior information. Whenever new information is acquired, which means that some other event has occurred, a different probability distribution becomes relevant. When the probability of the occurred event is known and positive the new probability distribution can be calculated by means of Bayes' rule. When this is the case the growth of knowledge proceeds along predetermined lines. The interesting case arises when the occurred event was entirely unexpected. This means that its probability was zero. It can be shown that in this case adjustment is possible, but not according to strictly predetermined lines. New probabilities cannot actually be calculated, but have to be assigned. Therefore, imaginative learning is possible within the subjective probability approach.

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Knowledge as a Connecting Principle: John Rae and the Austrian School

The object of this paper is to propose a reflection on knowledgge as a connecting principle, which is, as argued by Loasby (1991), the great Mengerian alternative to Adam Smiths principle of the division of labour. the paper elaborates on Loasby's idea that there exists a homology between the coordination of economic activities and the coordination of scientific ideas, both being concerned with 'the generation and testing of new conjectures' (*ibid*, p13), that is a problem of growth of knowledge.

In this context, an interesting author to be studied is John Rae, whose New Principles (Boston, 1834) can be considered as the 'missing link' between Smith's Wealth of Nations and Menger's Principles. Rae is known as the author who defines 'invention' as the prime mover of economic growth as opposed to Smith's accumulation and division of labour (Brewer, 1991). But the role of his concept of knowledge in his theoretical work as well as in his methodological criticism of Smith has not been properly understood (Ravix, 1997). a careful study of this concept can give interesting insights into the economic problem of knowledge creation.

Following from that, a new interpretation of the Austrian tradition (Menger, Bohm-Bawerk and Hayek) can be traced out. In fact, in the Austrian theory of capital and production, knowledge and the division of labour compete and give contrasted solutions to the economic methodological dilemma between the logical coherence of equilibrium and the empirical relevance of evolution.

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Don Lamberton, Australian National University, Canberra, Australia (dml309@coombs.anu.edu.au) Information: Pieces, Batches or Flows?

A re-examination of the indivisibility appropriability arguments in Arrow's seminal 1962 paper, 'Economic Welfare and the Allocation of Resources for Invention'. It is contended that Arrow's reasoning was based on the characteristics of a given piece of information or a given body of knowledge. The changing perception of information and the processes by which it is used, including both formal and informal flows, both tacit and codified knowledge, suggest that information acquired continuously for decisions continuously being made in consciousness that they are part of a developing chain opens the way for events and strategies not contemplated in Arrow's analysis.

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The Market as a Learning Process

The paper aims to portray the market as learning process, based on the view that our daily decision making problems are not unlike the one faced by the scientist, a view long advocated by Prof. Loasby. In the standard economics the market is portrayed as an efficient allocative mechanism with the implication that what is, is efficient. But there is a serious problem of accounting for change. Considering that economic growth and development is one of the prime concerns of economists, it came as an embarrassment when Solow (1957) found that only 12.5% of the per capita growth in the US can be attributed to the increase in capital. The remainder was deftly attributed to technological innovations. But the fact remains that the bulk of the growth in theoretically unaccounted for. Alternative conceptions have been proposed--Xinefficiency (Leibenstein), innovation (Schumpeter), alertness (Kirzner), market as a discovery mechanism (Hayek), Market as a creative process (Buchanan and Vanberg), etc. But often these have been received unenthusiastically, as marginally interesting but too vague to be taken seriously. I believe the failure stems from the lack of a theory of human action that can systematically account for some of the important ideas noted above. The paper is an attempt to portray the market as learning process, based on a conception of decision making advocated by Prof. Loasby and myself. It entails a host of interesting implications, e.g., process of endogenous change, entrepreneurship, simultaneous discoveries, social mobility, etc.

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The Emergence and Functioning of Markets

Contemporary economics knows little about the emergence of markets, and less about the way in which they function. It knows even less about what makes markets continue (and cease) to exist. It is one of the many merits of Brian Loasby that he has called attention to the importance of this last problem. The paper argues that a solution to it offers the instruments for solving the first two problems; that the subjectivism of the Austrian School indicates the direction in which to look; and that cooperation is at least as important as coordination for understanding markets.

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Communication Costs and the Boundaries of the Firm Much has been written about where the boundaries of the firm are drawn, but little about what occurs at the boundaries themselves. When a firm subcontracts, does it inform its suppliers fully of what it requires, or is it willing to accept what they have available? In practice firms often engage in a dialogue, or conversation, with their suppliers, in which at first they set out their general requirements, and only when the supplier

reports back on how these can be met are there more specific requirements set out. this paper models such conversations as a rational response to communications costs. the model is udes to examine the impact of new information technology, such as CAD/CAM, on the conduct of subcontracting. It can also be used to examine its impact on the marketing activities of firms. the technique of analysis, which is based on the economic theory of teams, has more general applications too. It can be used to model all the forms of dialogue involved in the processes of coordination both within and between firms.

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Marshallians and Austrians on markets: towards a possible synthesis

Since the emergence of the so-called 'marginal revolution', economic theory has been permanently with a major paradox. Its 'catallatic character has been regularly re-emphasised; the scheme of a pure exchange economy has always played a central role in the Walrasian theory of general economic equilibrium (GEE); the market has frequently been presented as the main mechanism of inter-individual coordination. This stress on the concept of market strongly contrasts with the fact that 'economists have no theory of how markets work' (B. Loasby, Equilibrium and Evolution. Manchester: Manchester University Press, 1991, p71). The seventies indeed pointed out that no satisfactory solution could be given to the problems of the tatonnement and the stability in a GEE framework (see, especially, F. Fisher, Disequilibrium Foundations of Equilibrium Economics. Cambridge: Cambridge University Press, 1983; see also the consequences of the Debreu - Mantel - Souvenschein theorem), confirming the earlier critiques of G Richardson (G Richardson, Information and Investment. Oxford: Oxford University Press, 1960; see also B Loasby: 'The working of a competitive economy: G C Richardson's post-Marshallian analysis', in B Loasby, The Mind and Method of the Economist. Aldershot: Elgar, 1989, chapter 6). It is therefore necessary to think again of the problem of the working of a market economy, but outside the usual Walrasian framework. From this prospect, Marshallian and Austrian traditions offer substantial elements.

The Marshallian approach always stressed the importance of 'marketing' or 'organization of markets'. This is why the first part of our contribution will be devoted to the study of the market institutions or of the market co-operative agreements which, according to Marshallian lives, permit the working of a market characterised by decentralised decisions and therefore by uncertainly (see again G Richardson op cit.): goodwill, interfirm relations, influence of space,... The existence of these institutions or agreements helps to understand how coordination is made possible but little is to be found in Marshall about market processes as such.

The Austrian approach – that B. Loasby discovered in a second stage of his academic life (op cit., p. xv) – presents the reverse features. Since Hayek to Lachmann through Kirzner, it focuses on market processes but its contribution to the analysis of the market institutions is very limited. However, Austrian market processes are not incompatible with and, even, can benefit from the introduction of institutions. Menger, Wieser and Hayek's works are sufficiently rich to be utilised in this perspective. This explains why we dedicate the second part of our paper to the introduction of market institutions within the Austrian analysis of market processes.

Finally, the last part of the contribution considers the compatibility of both Austrian and Marshallian contributions and to settle the main limits of their possible analytical integration within a theory of 'the working of a competitive economy'.

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Marshall and Management

A detailed analysis and evaluation of the views Marshall set out in his *Industry and Trade* on the movement for scientific management or Taylorism. His treatment of the movement seems to have been based primarily on American literature and to have been undertaken relatively late in the long process of composition of the book. Marshall's approval of the movement, although somewhat qualified, does seem to be in conflict with his more general 'evolutionary' emphasis on the importance of individual freedom to experiment and his distrust of centralised control.

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Equilibrium, Evolution and Complexity: from Loasby's general coordination problem to the theoretical foundations of Evolutionary Economics.

The strategy of always breaking big problems into smaller ones is sometimes profitably reversed to allow a deeper understanding of broader relationships. There has been increasing interest from less orthodox economists generally (and at this conference in particular) regarding two substantial methodological and theoretical problems, which when appropriately framed link the nebulous cloud of dissent about the axiom structure of received theory towards a unified perspective about the complex nature of the economic process. The first is the nature of information, coherence and change when the focus of the economic problem is shifted from allocation to coordination. The second concerns the abstract nature of an evolutionary process and how it may be framed in terms of the economic process. By emphasising the importance of connecting principles and drawing out the general nature of the coordination problem, the works of Brian Loasby (1976, 1991) provide both methodological impetus and general theoretical synthesis toward the foundations of a general theory of

economic evolution, once a further critical factor is incorporated.

What I wish to suggest in this paper is that the symbiotic relationship between these two problems may be elucidated by the construct of complexity, as it has been formally defined with topological and set theory argument. With complexity as a deep connecting principle (incorporating the notion of equilibrium as a special case) linking open system coordination generally to the nature of an abstract evolutionary process we may potentially have alighted upon the logical foundations of an evolutionary economics. In a further sense much work on the nature of economic competence and capability, technological institutional change, increasing returns, entrepreneurship and punctuated equilibria may be coherently integrated within this framework mapping the geometry of coordination, as construction principles, to the structure and behaviour of an evolving economic system. This paper presents an introduction to how we may synthesise the interdisciplinary research on the general nature of an evolutionary process (Kauffman, 1993, Holland, 1995) to the general nature of economic coordination (Hayek, 1948, Nelson and Winter, 1982, Lachmann, 1986, Richardson, 1990, Loasby, 1991) with the geometric construct of complexity as the foundation of a general theory of economic evolution.

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Is Allocative Efficiency Compatible with Development? For the classical economists, the competitive processes of the capitalist economy gave rise both to technical progress and an economic order exhibiting certain desirable properties. It soon became clear, however, that in the concrete conditions of real economies, progress and the perfection of the order were not necessarily compatible. This paper catalogues and

explores various aspects of the conflict between order and change as it emerged in the work of economic writers from Babbage to Schumpeter. The findings are related to more recent discussions of these conflicts in the work of in the work of economists such as Arthur, David and Porter.

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Loasby and Decisions: A Non-Coasian Perspective on the Nature of the Firm

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Firm Strategy, Innovation and Consumer Demand: An Austrian Evolutionary Perspective

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Incomplete Contracts and Economic Organization In this paper, I discuss and compare Loasby's view and the view of modern economists of organization (such as Hart, Moore and Tirole) on the crucial concept of incomplete contracts. I argue that Loasby, who is one of the first economists to emphasise the importance of incomplete contracts, has a view of these contracts that is strongly different from modern organisational economists' view by stressing that they are part of the enabling structure that allows firms to engage in organisational learning. This 'positive' view of incomplete contracts should be contrasted with the view of modern economists of organization, according to which incomplete contracts are important because they provide leeway for opportunism. Moreover, a Loasberian perspective also allows us to identify a number of weaknesses in present incomplete contracts methodology, such as the known-pay-off-assumption, the neglect of dissimilar complementary assets, and much else.

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Marshall's Consumer as an Innovator

The economic anthropologist Mary Douglas has said that 'the real moment of choosing is ... choice of comrades and their way of life'. Much consumption is an inherently social activity, and yet much of the economic analysis of consumption treats it as an matter of individual choice, neglecting interactions between consumers. There are some important exceptions, of course — many of which are documented in Becker's recent book, *Accounting for Tastes*.

An individual's consumption can be influenced by the behaviour of at least three groups: the peer group, with which the consumer wishes to associate, and with which the consumer wishes to share consumption activities; the distinction group (or groups) from which the consumer wishes to distinguish himself; and the aspiration group, to which the consumer aspires to

belong, but membership of which is as yet unattainable.

The first of these groups has made some progress into modern economic analysis, for example in the analysis of bandwagon behaviour, and in network externalities. The second and third groups feature less prominently. Distinction, however, is considered a potent force in modern sociological analysis of consumption (Bourdieu), developing from Veblen's concept of conspicuous consumption. Both groups were recognised by Adam Smith, who considered that 'the chief enjoyment of riches consists in the parade of riches'; by Senior who considered that 'the desire for distinction ... may be pronounced the most powerful of all human passions' and also drew attention to 'the desire to build, to ornament and to furnish - tastes which, where they exist, are absolutely insatiable and seem to increase with every improvement in civilisation'; and indeed by Marshall who was moved to 'remark with Senior that "strong as is the desire for variety, it is weak compared to the desire for distinction" ', and that with 'every step in his progress upwards ... (man) desires not merely larger quantities of things ... but better qualities ... a greater choice of things, and things that will satisfy new wants growing

This paper sketches how these three social aspects to consumption have contributed to the evolution of economic thinking about consumption. Recognising the formal similarity of production and demand theory in modern economic theory, we argue that the consumer needs to be seen as an innovator if we are to understand the evolution of consumption.

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New Capabilities Embedded in New Products

In many of his recent papers Brian Loasby, in dealing with internal firm organization and the external organization between the firm and the market, has stressed the role of capabilities. They represent a firm's 'knowledge-how' which intervenes both in the production and testing of new knowledge and skills, and in their (internal and external) coordination. Being the result of specialisation, the necessity of their integration (e.g. through access and control) should not leave out the possibility of their further development. 'Capabilities should be analysed in a context of change: response to change, preparation of change, and the generation of change' ('The organization of capabilities', EMOT Workshop, Reading University 1995).

These propositions, which link organization structures and the growth of knowledge, parallel well some conclusions reached by Georgescu-Roegen in his *Analytical Economics* (1966), namely, that history seems to be the result of two factors: a hysteresis process and the emergence of novelty. Their presence should alert the scientist, and the economist in particular, that a qualitative residual is always at work

when a quality-related phenomenon is projected on a cardinal grid. (As for example, in the processes involved in the so-called 'unit of production', where any additional unit generates an internal morphological change).

These reflections converge to uncover the qualitative change, the production of new capabilities which constantly alter firms' production processes and products. I focus on this last aspect in particular, the new knowledge embedded in new products, which in the literature on firms' organization structures has been overlooked. When deciding to produce a new product a firm is also deciding to alter the consumption set, i.e. to intervene in that zone of consumer choice in which goods are not yet 'goods'. How do they become so? From what has just been said the requirements the new products should fulfil are both recognizability (pathdependent knowledge) and differential novelty. The firm therefore should maintain a difficult balance between novelty and continuity. Two related organization solutions are explored in the paper. One is for the firm to discover and exploit the interdependencies which exist among goods, through which the firm is able to intervene on the degree of novelty it is willing to deliver. The other is to exploit the novelty which comes from recombination - of characteristics, functions, hierarchies, timings. In both solutions, firms' new products are not, as we are used to think, single-function, close-ended goods, but openended complexes which can be flexibly decomposed and recomposed.

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The Loasbian View of the Firm with an Application to the Computer Industry

The aim of this paper is to present an outline of Brian Loasby's conceptualisation of the firm drawing on some of his recent work. Particular attention is paid to the role of knowledge in this conceptualisation. The second part of the paper analyses some key features of the evolving structure of the computer industry and suggests ways in which the Loasbian conceptualisation of the firm might be useful in examining the part played by firms in the evolution of this industry. In line with Loasby's own discussion of the firm, the analysis in this paper is qualitative rather than quantitative.

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The Changing Nature of Corporate Technology Diversification and the Importance of Organisational Capability.

This paper considers the firm as a 'social institution for enhancing capabilities', a perspective to which Brian Loasby has been a principal contributor. Loasby perceives the firm not as a device for reducing transaction costs as in a more Coasian or

Williamsonian approach, but as a community in which 'know-how' develops from knowledge-in-use and experience to create firm-specific capabilities. Learning in production through problem-solving activity leads to the extension of existing firm capabilities and the development of new ones. Thus the firm will tend to increase the scope of its capabilities, or in other words diversify. The Loasbian firm however, is not solely a generator of capabilities but also acts as a device for their co-ordination both to respond to and to create new productive opportunities. In its role as a co-ordinating device, the Loasbian firm has to balance two facets to its structure: its internal organisation and its external organisation. In defining these two facets Loasby draws on Richardson's distinction between similar and complementary activities and activities which are complementary but dissimilar. The former make up the firm's internal organisation as control and access are both necessary to exploit such capabilities fully, whereas access alone is sufficient for those activities which are complementary but dissimilar and thus they can be retained at some distance in the firm's external organisation. The capability to co-ordinate though, remains crucial wherever the capabilities are drawn

The issues of co-ordination and control are also related to the size of the firm. Firm size impacts upon organisation and in turn, organisation shapes and constrains the growth of knowledge. Large size is advantageous as the variety of skills and specialised knowledge available through the greater division of labour can generate more innovative activity in ways that smaller firms simply are unable to achieve as a function of their size. Thus one would expect large firms to be more technologically diversified in their capabilities than smaller ones. Indeed, the work of Alfred Chandler has illustrated that increases in firm scale (size) and scope (diversity of capabilities) are simultaneously achieved through growth historically. More recent literature however, perceives that technological diversification in recent decades has been due largely the growing inter-relatedness of formerly distinct fields of technology and the increasingly multi-technology nature of artefacts. If this is true, we would expect to see a change in the relationship between firm size and technological diversification over time. Therefore we attempt to show from an analysis of large firms that technological diversification was positively linked to growth in firm size historically, but in more recent times that increased technological diversification is irrespective of firm size. Using data derived from the US Patent Office this paper seeks to explore this proposition among 30 of the world's historically largest firms in the 20th century.

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Theorising about Historical Processes in Economics: From Timelessness to Time Irreversibility

Christopher Torr, University of South Africa, Pretoria, South Africa (TORRCSW@ALPHA.UNISA.AC.ZA) Equilibrium and equilibrium

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Disequilibrium States and Adjustment Processes: Towards a Historical-Time Analysis of Behaviour Under Uncertainty

An important theme in Post Keynesian economics is the failure of mainstream economic theory to provide an adequate analysis of the effects of uncertainty on economic behaviour. This critique of the mainstream approach to uncertainty has focused on two fundamental methodological issues: the treatment of uncertainty in terms of well-defined probability distributions and the use of the (full-information) equilibrium method of analysis to model adjustment processes. 'Fundamentalist' interpretations of Keynes accuse the classical economic theory of being itself one of these pretty, polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future. It is a theme that is central to Brian Loasby's critique of mainstream economic analysis. Drawing on a diversity of perspectives both within economics (particularly the work of Smith, Marshall and Keynes as well as the modern contributions of the Post Keynesian and Austrian schools) and from other disciplines, Loasby has stressed that knowledge necessarily involves interpretation and partial ignorance (i.e. uncertainty) is the source of disequilibrium and the driving force behind adjustment process. The objective of this paper is to explore the constructive methodological implications of the Post Keynesian critique of mainstream approaches to uncertainty. The paper seeks to move beyond the negative (but necessary) task of critique to the positive task of developing more appropriate methods of analysis to move from deconstruction to re-construction. It is argued that the writings of Keynes and Loasby provide the basis not only for a critique of mainstream economic theory but also point the way forward.

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The Bounds of Rationality: Reflections on the Economic Representation of Rationality in the Late 20th Century

Using ideas from the broad growth of knowledge tradition, this paper explores the dynamics of a case study in disciplinary development. The area of disciplinary development relates to the vexed question of rationality, and the matrix of disciplines

encompasses neo-classical based economics, finance and accounting.

For the vast bulk of neo-classical based disciplinary research the intermittent debates over the nature of economic rationality have been peripheral, if not irrelevant. During the late 1980s and into the 1990s, however, a subtle change appears to have started to take place in the literature of neo-classical based disciplinary research. The change is with regard to the treatment of the notion of bounded rationality; from being a footnote to the text it appears to becoming more firmly integrated within the body of the text. The paper explores the process by which the argument has been conducted and the possible impact it will have on future research within the disciplinary matrix.

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Bounded Rationality, Uncertainty and Post Keynesian Analysis of the Firm

Williamson claims that bounded rationality is a key behavioural assumption maintained by the New Institutional Economics. Combined with opportunism, bounded rationality is a key component of 'behavioural' uncertainty. Indeed, this 'behavioural' uncertainty is a principal dimension by which transactions differ. Post Keynesian economists such as Paul Davidson typically distinguish between ergodic and nonergodic processes with the later providing for a technical definition of 'fundamental' uncertainty. Often the salience of this 'fundamental' uncertainty has been ignored and/or conflated with bounded rationality and 'behavioural' uncertainty. Consequently the richness and distinctness of such concepts is much diminished. In this chapter we show that while bounded rationality is a key behavioural assumption that may account for the existence of high market based transaction costs (in an ergodic world) and thus the emergence of firms as distinct modes of economic organisation; it may do so only in the short run. Rather we demonstrate that nonergodicity can be used to explain the existence of transaction costs and firms in the long run.

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The Methodological Implications of Post Marshallian Economics

Brian Loasby has defined much of his more recent work as 'Post Marshallian.¹ Following Loasby, the Post Marshallian tradition includes the work of a group

¹ Loasby, B. 1978 Whatever happened to Marshall's theory of value?, *Scottish Journal of Political Economy*, 25, 1-12; 1990 Firms, markets and the principle of continuity, in Whitaker, J., editor, *Centenary Essays on Alfred Marshall*, Royal Economic Society/Cambridge University Press, Cambrid ge; 1991 *Equilibrium and Evolution*, Manchester University Press, Manchester.

of theorists, broadly within the field of industrial organisation or industrial economics, whose work attempted to return to the spirit of Marshall's Principles and Industry and Trade, rather than the technical adaptations of Marshall's work which occurred in the 1920s and 1930s. The theorists of interest include Andrews, Penrose and Richardson.² and Loasby's more recent work has dome much to develop these theorists' works as they apply to explanations of states and processes of the organisation of production. Although Andrews, Penrose and Richardson can hardly be said to have formed a Post Marshallian school when at their peaks in the 1960s, their works have gained renewed prominence over the last ten years or so,³ especially so given the broadening of industrial organisation research to consider issues of management, strategy and marketing.

Loasby, along with others, has had an important role in drawing to the attention of researchers in industrial organisation, these prominent Post Marshallian theorists. A common trait among their works is a bridging of the gap between formal theory and the world of the organisation of production as experienced by managers of companies, that is, those responsible for the reproduction and transformation of the subject matter which academics in the area concern themselves. The emphasis on realisticness, or more accurately, being concerned with communicating the experiences of managers with theoretical explanation, is most apparent in Andrews' work on pricing and of the role of competitive forces, in Penrose's explanation of the limits of the firm being in managerial competence, and in Richardson's work on investment coordination and on subcontracting relations.

But the methods of the three selected prominent Post Marshallians, are, in contrast to Loasby's work, elusive, multi-faceted, occasionally vague and not particularly methodologically aware. It is the aim of this paper to explore the methods and techniques employed by Andrews, Penrose and Richardson in explaining their theories, and in testing or verifying their theories in the context of their many and varied involvements with companies. Readings of the theoretical works give s the impression that theories

² Andrews, P.W.S. 1949, Manufacturing Business, Macmillan, London; 1964 On Competition in Economic Theory, Macmillan, London; Andrews, P.W.S. and Brunner, E. 1975 Studies on Pricing, Macmillan, London; Penrose, E.T. 1959 The Theory of the Growth of the Firm, Blackwell, Oxford; Richardson, G.B. 1960 Information and Investment, Oxford University Press, Oxford; 1972 The organisation of industry, Economic Journal 82, 883-896.

and explanations are formulated against a background of accumulated industrial experience across different countries, industries, types of firms and types of situations, be it advising on pricing or in the face of monopolies and mergers inquiries. The other critical factor is, as mentioned above, an understanding of the spirit of Marshall's *Principles*, as also reflected in *Industry and Trade*.

The aim here is to investigate the possibility of constructing a fairly consistent methodological basis to assist in the undertaking of further empirical research into industrial organisation within the Post Marshallian tradition. Two broad approaches seem to offer some guidance in gaining a deeper understanding of how the early theorists assembled and tested their developing theoretical knowledge, and how such insights can be further developed. The approaches suggested are hermeneutics and critical realism.

Hermeneutics, in its post-1960s form, offers insights in combining knowledge through engaging conversation, in actively seeking out different perspectives, and putting these perspectives at risk in engaging in dialogue.4 The clearest form in undertaking such research is in ethnomethodological research. The approach commonly gives up the scientific ambitions of formulating rules and seeking causal, deterministic or probabilistic forms of knowledge. The emphasis instead is on the interactions, commensurabilites incommensurabilities of the knowledge produced and held within language communities. The growth of knowledge debates of the late 1960s and early 1970s are expected to be instructive here, especially Kuhn's Structure of Scientific Revolutions, and concepts of paradigms and revolutionary science therein.5 Post Marshallian research is necessarily rhetorical, and also involves dialogue across and within language communities.

Critical realism has also been developed within economics research since the mid-1980s. In contrast

³ Earl, P.E. 1995 Microeconomic for Business and Marketing, Edward Elgar, Aldershot; Foss, N.J. 1993 Cooperation is competition: George Richardson on coordination and interfirm relations, British Review of Economic Issues, 16, 25-49; Lee, F.S. and Earl, P.E.,

⁴ Bernstein, R. 1983 Beyond Objectivism and Relativism. Science, Hermeneutics and Praxis, Blackwell, Oxford; Henderson, W. 1993 Economics and Language, Routledge, London; Rorty, R. 1980 Philosophy and the Mirror of Nature, Blackwell, Oxford; Lavoie, D., editor, 1991 Economics and Hermeneutics, Routledge, London.

⁵ Kuhn, T. 1970 The Structure of Scientific Revolutions, second edition, University of Chicago Press, Chicago and London; 1977 The Essential Tension. Selected Studies in Scientific Tradition and Change, University of Chicago Press, Chicago and London; Loasby, B.J. 1976 Choice, Complexity and Ignorance, Cambridge University Press, Cambridge.

⁶ Bhaskar, R. 1979 The Possibility of Naturalism, Harvester Press, Brighton; Boylan, T.A. and O'Gorman, P.F. 1995 Beyond Rhetoric and Realism in Economics, Routledge, London; Lawson, T. 1989 Abstract tendencies and stylised facts: a realist

with hermeneutics approaches, critical realism accepts the basic objective of seeking scientific knowledge of truths. It is both ontological and epistemological because it reformulates how science is conducted prior to arguing for its abduction into social scientific practice. Case study research within research into the organisation of production would be encouraged under either a critical realist or hermeneutics approach, but the critical realist approach posits linkages across cases, connections such that similar organisations in similar situations will be subject to some common forces and determinants, as well as some unique factors. These allow for the possibility of causal explanation.

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Economics, the State and the State of Economics In recent months our profession has come in for some well-deserved bashing in the intellectual press - welldeserved because some of our most visible and influential colleagues present economic theory as a pitifully narrow and unrealistic framework, yet represent themselves as the economic mainstream. Perceptive (but insufficiently educated) intellectual pundits conclude that our discipline is irrelevant for understanding and useless for policy. Thankfully, however, the stream of economic thinking is far wider and far deeper than these two groups recognise. Indeed, there is a large and richly veined body of classical, neoclassical, modern and contemporary work to draw on including that of Brian Loasby and the contributors to this conference in his honor. Drawing on this rich background, our great challenge is to reestablish the twin purposes of any scientific discipline; namely, to illuminate experience with theory informed by facts and to provide useful advice for private and public decision makers based on plausible theory.

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Scale, Scope, and the Re-use of Knowledge

The traditional notion of economies of scale and the more recently fashionable idea of economies of scope both appear in neoclassical economic theory as purely technical flow relationships. For example, economies of scale in this theory reflect lower unit costs at higher rates of output (Q/t); and, as the economist's favourite example of the phenomenon suggests, such reductions in cost arise from purely technical relations, as when, thanks to the laws of geometry, using a larger pipe doubles throughput without doubling the materials needed to make the pipe. At the same time, however, economists have also toyed with another notion of

approach to economic analysis, Cambridge Journal of Economics, 13, 59-78; 1995 A critical perspective on contemporary "economic theory", Journal of Economic Issues, 29, 1-32; 1997 Economics and Reality, Routledge, London.

"scale" in which lower costs at higher outputs arise because of the growth of knowledge such scale enables. As Loasby (1989, p 62) points out, this is what distinguished Marshall's conception of increasing returns from the neoclassical account of scale economies. Via the concept of the learning curve, the knowledge-increasing effects of scale have entered the mainstream literature (e. g., Spence 1981). But, apart from the work of Alchian (1959),

there has been little attempt to reconcile the standard account with a learning account.

Drawing on recent work on the reuse of knowledge – as, for example, the case of the reuse of software code (Cusumano 1991) – this paper will (1) sort through competing accounts of economies of scale and scope; (2) attempt to make sense of these concepts in terms of economies in the reuse of knowledge; and (3) make the bold claim that, at base, economies of scale and scope – even those arising from purely technical causes – always boil down to the reuse of knowledge.

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Competition, Equilibrium and Economic Progress: That Wretched Division of Labour and Increasing Returns.

This paper revisits some old problems of economic theory discussed particularly in the work of Adam Smith, Alfred Marshall and Allyn Young in a manner not congenial to contemporary high theory. they touch on what Marshall called the high theme of economic progress and the role therein of division of labour and increasing returns, topics which from other perspectives are seen as 'wretched' since they play havoc with conventional notions of competition and equilibrium. This is a theme which has featured not infrequently in Brian Loasby's work and which has also been addressed by the present author on previous occasions.

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STREAM 1: Technology, Innovation and Firm Behaviour

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Long-run Dynamic Change in Economic Systems: Implications of an Emergent Information and Communications Technology [ICT] Paradigm

This paper outlines an evolutionary framework of analysis concerning long-run organisational and institutional change. The approach is defined as quasi-institutionalist and involves a synthesis of an institutionalist methodology with the neo-Schumpeterian idea of techno-economic paradigms associated with the work of Freeman and Perez. This synthesis should be viewed as an initial exploratory exercise in interpretation rather than exegesis.

The principal argument of the paper is that the present phase of slowdown in the global economy is a result of a fundamental, qualitative change taking place, at the macro-level, in the socio-economic systems of the developed countries. This change involves a shift from a "Fordist" paradigm based on energy intensive production systems and services; to a new 'Information and Communications Technology' (ICT) paradigm, or 'Information Age' based on knowledge intensive production systems and services.

One implication of such change is that it will require transformation of the existing institutional, managerial and organisational "best practices" before another period of growth and prosperity can begin. Such best practices may be 'locked in' to the processes and methods of the old "Fordist" paradigm. Consequently, achieving the necessary change to suit the requirements of the "new" paradigm could be problematic, particularly in the early stages of the diffusion process. The framework incorporates a holistic approach that concerns social, political, economic and institutional issues and addresses the key factors of 'change and time'. It is intended to offer an alternative perspective from that of orthodox economic theory, which, as the extra-market organisations and institutions of economies have altered, has retreated into a formal and abstract domain of a "pure" market system that externalises or ignores such dynamic change in economic systems and appears to be based in a reality that has long since disappeared. This heterodox tradition in economics is associated, inter alia, with the works of economists such as Thorstein Veblen, John R Commons and Joseph Schumpeter. Furthermore, this heterodox approach is deemed more appropriate for dealing with long-run dynamic change in socioeconomic systems than the static-allocative approach of orthodox economics.

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The impact of the Information Technology revolution on the Internationalisation of corporate technology: the case of the Electrical industry

After World War II, the leadership of the US imposed a global order which, by strengthening economic and political interdependence, guaranteed a peaceful framework for the development of international relations. This framework provided the background within which the internationalisation of economic and political relations continued to increase. In this historical scenario, the rising pace of technological change in communications has doubtless played a major role in the increasing internationalisation of economic relations at a cross-firm level. As pointed out by Penrose, the firm is an institution that develops capabilities through an internal learning process. In order to strengthen these capabilities, the firm has to extend them into new activities and in new geographic locations.

If interpreted as a part of a broader revolution (i.e. of Information Technology (IT)), the shift in communications has played a great role in strengthening the internationalisation of economic activity by eliminating time and space constraints. Thus, the geographical diversification in the communication (or broadly IT) industry can be understood in terms of an internationalisation of overall economic relations.

This paper looks at the relationship between the increase in international economic relations over the twentieth century and the main breakthroughs in technological change in communications (i.e. it investigates how the communication revolution has influenced the geographical diversification or internationalisation of firms). In particular, it focuses on two decades (i.e. 1969-1979 and 1980-1990).

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Uncertainty, Technical Change and Keynes's Probability: initial explorations

The aim of this paper is to show that Keynes's concept of probability can enrich the understanding of the process of the introduction of innovation offered by the Neo-Schumpeterian approach. The latter has a peculiar understanding of the technical change process, which includes concepts such as knowledge base, cumulativeness, technological paradigm, technological trajectory, and uncertainty. To deal with this uncertainty Neo-Schumpeterians introduce the concept of routines. What is suggested here is that the concepts of Degree of Rational Belief and Weight of Argument, which come from the Keynes theory of probability. when used together with the concept of routines, can clarify the rationality of the decision-making process in introduction of an innovation. In section II, I describe those aspects of the Neo-Schumpeterian (hereafter NS) approach to technology that are important for our discussion. The main features of Keynes's probability