A GUIDE TO POST-KEYNESIAN ECONOMICS

Foreword by Joan Robinson

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A guide to post-Keynesian econOmics :: A S Eichner, Introducion

8 The Key contributions

Roy Harrod: what causes the observable movement of the economic system to change over time? Answer: Harrod-Domar formula relating rate of growth as dependent variable to

\# incremental capital-output ratio as independent variable.

Harrod, "An Essay in Dynamic Theory," Econ Journal, March 1939

______, <u>Towards A Dynamic Economics</u>, Macmillan, London, 1948

______, <u>Economic Essays</u>, Harcoxurt Brace, 1952

Domar, <u>Essays in the Theory of Economic Growth</u>, Oxford UP 1957

9 Joan Robinson, <u>The Accumulation of Capital</u>, 1956

____________, <u>Essays in the Theory of Economic Growth</u>, 1962

Nicholas Kaldor, <u>Essays on Value and Distributionm</u>, 1960 which contxains reprint of 1956 paper.

Both draw on Kalecki's distinction between wages and profits (and through him on Marx) to explain an essential aspect of growth dynamics, an aspect inextricably linked to the distribution of income. A increase in the rate of growth implies a greater share of total income going to profitms, thus leaving workers relatively less well off.

9f Paul Samuelson and Robert Solow: Development of neoclassical growth model, general equilibrium, emphasis on substitution effects of changes in relative prices.

11 <u>The essential elements</u>: contrast of <u>P-K</u> and <u>N-C</u>

\#1 12 PK direct linking of growth rate and distribution of income: the income effects produced by investment and other sources of growth far outweigh the substitution effxectsx resulting from price moxvements.

NC, usually by assumption, eliminates any possible income effects.

\#2 PK is formulated with dominant economic fact of the past several centuries in mind. This is the continuous though uneven expansion of the various economies over time. The economy is conceived as being constantly in motion.

NC admits disturbances of general ~~xxxxxx~~ equilibrium but would have them followed by movement to another position of rest.

PK distinguishes the factors responsible for the secular growth of output (the trend line) and the factors responsible for the cyclical movements around the trend line.

Hence distinction between long-period and short-period analyses. No claim is made that the cyclical fluctuations (whatever their origin) are necessarily self-correcting.

#3 14 PK is meant to describe an economy with advanced credit and other monetary institutions -- all of which play a fundamental role in the process under analysis.

NC contends that money does not matter insofar as real output is concerned, only insofar as the secular rate of inflation is concerned.

PK's distinction between savings and investment rests on the elasticity of credit. In a modest downturn of business activity the decline of demand for cash and credit will yield a build-up of banking reserves. But a downturn is severe if it impairs confidence in the financial structure: a decline in asset values can progress to the point where it undermines the whole basis for banks extending credit.

15 Money matters because without it purchases cannot be made so that aggregate demand will fall. Even if purchases are only delayed, the economy's actual growth path will be different from what otherwise it would have been.

#4 PK acknowledges that within the industrial core of a modern technologically advanced economy, both prices and wages are assumed to be administered, that is, they are quoted by the supplier on a take-it-or-leave-it basis.

Such prices become the basis of the rate of discretionary income of firms and households. The higher the price level in the oligopolistic core of the economy, costs and other factors remaining unchanged, the greater will be the rate of cash flow and thus the larger the volume of internally generated savings.

PK faces the fact of multinationals and trade unions.

16 There follows the system of more flexible prices which prevails in world commodity markets. The interaction of oligopolistic core and the competitive commodity markets is an important part of the inflationary process.

For PK competition need involve no more than a continual effort by business firms to exploit the most profitable investment opportunities.

In contrast NC depends critically on the assumption that all suppliers of goods and labor services are price-takers in competitive markets.

#5 Finally, PK is concerned with the dynamic behavior of actual economic systems. Unlike NC, it is not limited to the analysis of resource allocation under hypothetical market conditions. Hence, PK can look at the economic system with fewer intellectual blinders while still providing a workable model to explain the system's laws of motion.

#6 To the essential elements listed by Eichner in the <u>Introduction</u> may perhaps be added the notion of historical time.

John B. Burbidge, p. 140, notes:

... In <u>The General Theory</u> (1936) Keynes showed that much of what happens in an actual economy can be understood only by assuming the existence of uncertainty. The essence of a real economy that operates in historical time is that its past cannot be changed and its future cannot be known.

Alfred S. Eichner adds, p. 170 f.,:

... When the income effects are fully allowed for, however, as they must be in a post-Keynesian position, there need not be any new equilibrium position. Rather, the change in investment... is likely to initiate a process (or, more accurately, modify a process already under way) without any determinable end state. In other words, the analysis shifts from logical time to historical time in which the future cannot be predicted because of the (171) complex nature of the interaction among the different social subsystems that comprise the larger system (on this see p. 171).

Basil J. Moore, p. 120 ff., 129

... Perhaps the most basic point underlying the post-Keynesian position on money is that historical time must be taken seriously. A sharp distinction must be made between historical and logical time. For while logical time can more either forward or backward, historical time can only go forward. The essence of an economy that operates in historical time is that its past is given and cannot be changed and that its future is uncertain & cannot be known.

Policy implications

16 The shift from neoclassical to post-Keynesian economics
17 resembles previous shifts in scientific paradigms. While the shift is occurring, it is easier to identify the outmoded concepts that are likely to be swept away than to anticipate all the implications, political as well as intellectual, of the new mode of analysis. For the incipient paradigm is more a program of research, with unproductive lines of inquiry roped off, that a fully developed body of knowledge.

Those implications that can be already seen are likely to be disconcerting across a wide spectrum of political opiniOn. Consefvatives vs conclusion that distribution of income can be significantly altered without impairing productivity. Liberals vs compatibility of efficiently working economy without competitive markets. Radicals vs solutions without changing institutions.

On one count PK thinkers likely to agree: inflation cannot be controlled through conventional instruments of fiscal and monetary policy. Such policy supposes excess demand; PK attributes inflation to fundamental conflict over the distribution of available income and output. NC policy , by curtailing the level of economic activity, simply reduces the amount of income and output available for distribution, and thereby exacerbates the basic conflict. It does little to balance the rate ~~of rate~~ of nominal income with the rate of growth of real income -- an unbalance that constitutes inflation.

18 Hence the problem for PK is to find a policy for incomes that works effectively and equitably.

20 Harrod: warranted and natural rates of growth
warranted: keeps all capital fully utilized
natural: keeps fully employed a growing labor force with its growing productivity.

21 Problem: Is it likely or even possible for a capitalist economy actually to grow at a rate equal to the warranted and natural rates?

Neoclassical: concentrated on instabilities brought to light by Harrod-Domar formulation, and sought to solve them along neoclassical lines. Their achievements were within a framework that assumed the non-existence of the historical problem, Why have economic growth and business cycles historically gone hand in hand?

22ff Eight characteristics of NC theory.

24 The post-Keynesian alternative

Emergent probability

25 The PK view of macrodynamics sees a capitalist system as one growing over time but in an uneven manner. Of central concern is the question why these growth rates differ between countries or at different periods of time within the same country. Again, why is a capitalist economy characterized by short-run cyclical fluctuations in output and employment, with investment playing a key role in generating these cycles?

26 Why do these fluctuations commonly remain within bounds? Does the price mechanism really cause this?

The collapse of the 1930's suggests that there is no automatic mechanism that can always be counted on.

The diverging assumptions of PK and NC, pp. 26 - 30.

Two of the most important of NC assumptions are given tastes and given technologies. In contrast, PK theorists have been viewing the process of growth as one of "qualitative change," whereby the composition of output and the methods of producing that output are constantly shifting. Thus... as per capita income increases, demand shifts to new goods as consumer tastes change, inducing a change in the distribution of resources and the development of new technologies to produce the goods now in greater demand.

27 Besides new technologies, there is the variability of technology. Returns to scale may equal, exceed, or be less than than the increase in labor or capital. Again, the kinds of technologies and the degrees of mechanization can and usually will vary across and ~~xxx~~ within sectors of the economy. Even in the most advanced economies there may coexist highly mechanized firms employing the latest technologies alongside technologically backward inefficient firms not only in the same sector but even in the same industry. There follow widely differing profit rates and wage rates.

Where NC holds that an increase in the share of output devoted to investment cannot permanently increase the rate at which the economy grows, PK emphasizes that new technologies can seldom be introduced without large doses of investment.... 28 Other things being equal, the bigger the share of output devoted to investment, the more rapidly will this growth process unfold.

The changing composition of demand and the continuous introduction of new technologies -- largely through investment -- will have a tendency to proceed at an uneven pace.

Where do the savings to finance large investment outlays come from? In PK economics there is no presumption that these savings are limited to the proportion of income not spent on consumption needs... In real life most houxsehold savings flow into the housing market... A large portion of money to invest comes from the administered prices of capitalists, especailly of the larger oligopolistic firms.

29 Such changes in the savxings ratios can be looked upon as the alternative to the change inx relative factor prices relied upon in neoclassical models.

From the foregoing it should be clear that PK regards the entrepreneur or the entrepreneurial function as ~~thx~~ the central figure in the growth process.

Policy implications

30 NC lends itself very poorly to policy prescriptions.

32 PK has much to say about the structxure of a policy that will permit full employment, price stability, and a resumption of growth. Stimulative fiscal and monetary policies, coupled with an incomesx policy, will achixeve thxe first two goals. Moreover, the growh goal dictates that incomes policy permit high levels of investment.

34 In competitive "flexprice" markets, pricing follows orthodox theory. Pp. 44 f. make it very clear that this chapter deals solely with "fixprice" markets

in which prices reflect both "normal" production costs (cf. below, p. 40) and the demand for retained profits to finance planned investment expenditures.

35 PK theories maintain that "fixprice" is by far the more important part of the private-enterprise sector of modern capitalist economies,

in which changes in demand are met not by change in price but by change in output.

If the change is judged to be transitory, output speeds up or slackens to meet the occasion.

If the change is judged to be permanent, and increasing, then producers may want an increase in their productive capacity, and then may mark-up their prices to be able to make the appropriate investment.

If the change is judged to be permanent and decreasing, then the producers will look for better opportunities for investment and raise prices to be able to finance it.

36 The meaning of competition.

Critique of the NC view.

37 From the Walrasian viewpoint economics is concerned with the optimal allocation of scarce resources among competing ends. The emphasis is on price,and allocation is effected among individuals at a point of time.

PK view: from Adam Smith to Karl Marx competition was conceived not as an end-state but as a process. As reflected in investment and growth policies, resources are allocated -- and ultimately income distributed -- between social classes over time.... The key strategic variable becomes the level of capital expenditures derived from the investment plans of firms, with competitive rivalry focused on relative growth rates and relative market shares. Rather than making short-run profit maximization an end in itself, firms set profits as a means to an end, that of enabling them to expand over time, preferably by enabling them to increase their market share.

37f PK writers argue that the behavioral goal of firms is to maximize the growth of sales revenue over time, subject to a minimum profit constraint.

38 The mark-up

The evidence shows that between 75% and 90% of gross fixed capital expenditures in the U. S. manufacturing industry is financed from retained profits (Eichner 1976).

40 Thus actual prices do not reflect current demand conditions; rather they reflect the funds requirement for the planned investment expenditure the firm considers necessary if it is to adjust its capacity sufficiently to meet exected demand.

The role of demand is not to cause prices to adjust in a thermostatic manner so as to clear markets and achieve the famous WAlrasian equilibrium. Rather it is to shift resouces among industries over the longer period through its effects on expectations of profitability and so on investment.

40 Normal costs

The second major determainant of prices according to PK is the level of normal costs. These are defined as the costs which would apply at some standard, or expected, rate of capacity utilization if the economy were on its secular or long-term growth line. Neither temporary changes in production costs nor temporary changes inproduct demand directly influence output price to any significant extent.

42 Policy implications

43 If efforts are made to change the functional share of corporate income going either to workers or to capitalists..., a wage-price spiral will occur.

In negotiating on money wages between workers and capitalists, unions have their eye on their "fair" or historic

44 share of the total pie. If, therefore, employers have the ability to increase mark-ups as a result of a need to finance investment expenditure, real wages will be eroded as prices rise. Unions may then press for a larger money wage to maintain their "fair" share, and the basis for a wage-price spiral will have been laid. It is for this reason that PK theorists see a prices and incomes policy as a necessary adjunct to traditional demand management policies, together with some social mechanism (eg indiciative planning plus selective public sector spending) to direct the amount and type of investment. Quotes from Keynes, Joan Robinson).

PK follows the classical tradition in speaking of wages and profits, workers and capitalists. But it is aware of a functional relationship that cannot be violated without giving rise to a price spiral. Students will learn much in working similarities and differences between this chapter and my circulation analysis.

46 The PK approach to income distribution takes the central proposition of Keynes' theory of output and employment as its point of departure. This proposition can be summarized briefly in the statement that "given the psychology of the public, the level of output and employment as a whole depends on the amount of investment." (Keynes 1936) However, PK extend Keynes' theory to argue that investment is a primary determinant, not only of output and employment, but also of the distribution of the national income between wages and profits.

47 Major emphasis is placed on the (distribution of the) aggregate national output between consumption and investment as the counterpart on the product side to the distribution income between wages and profits on the income side, with aggregate output itself determined by the relative balance between savings and investment and by the multiplier.

Orthodox theory

Supposes competitive markets and argues from marginal analysis.

Often criticized for its neglect of insitutional, social, and historical factors, it has come under fire in more intrinsic fashion from Keynes and Sraffa.

49 Keynes (1936) denied that, in the case of labor services, the wage would necessarily be equal to the marginal disutility of the effort being put forward. That is,he disputed that labor could choose the real wage at which ~~he~~ it would be employed. Keynes went on to construct a theory to explain the level of employment on a quite different basis -- and in the process he implicitly denied (Sidney Weintraub 1956) that the demand for labor depends on marginal productivity. Thus Keynes rejected the notion that either the income of labor or the amount of employment could be determined by marginalist principles operating at the microeconomic level in the labor market. He also rejected the analogous arguments about the income and amount of capital employed, but his reasoning on

on this point was less explicit.

50 Piero Sraffa, <u>Production of Commodities by Means of Commodities</u>, Cambridge University Press, 1960.

Sraffa argued that there was no need to rely on either marginal productivity or marginal disutility to determine equilibrium prices.

Sraffa also was able to show that once capital services are recognized as deriving from heterogeneous commodities which, instead of passing through the hands of final consumers, are used in the production process, there is no way to measure the "quantity of capital" -- except by calculating these quantities in value terms. Such values, however, will depend upon prices... and the prices in turn will depend upon income (since with a different distribution of income, the rate of profit [that must be included to cover the services of the capital goods in the prices obtained by capital goods] would be different.)

It follows that there is no simple monotonic relation between the quantity of capital and its price. Joan Robinson reached a parallel conclusion in 1956, and Pierangelo Garegnani (1960, '66, '70) has stressed that Sraffa's analysis is more fundamental.

<u>Keynes and Kalecki</u>

<u>52</u> Keynes (46) had contended that the level of output and employment depended on the amount of investment. Kalecki added the adage that "workers spend what they get; capitalists get what they spend."

Following Kalecki, the national <u>income</u> can be divided into the profits received by capitalists and the wages received by the workers. The national <u>product</u> can be divided into the consumption of the workers and, on the other hand, the investment and the consumption of the capitalists.

With the workers assumed to spend all their wages on consumption, their earnings must be equal to the value of the workers' consumption goods produced since all their wages are spent on them. Hence, the income of capitalists, profits, will be equal to the value of the goods purchased by the capitalists; namely, their investments and their consumption.

53 Hence two conclusions.

First, capitalists can increase the share of national income they receive as profits simply increasing the amount they spend on investment, with the higher level of investment leading, of course, to an increase ~~of~~ in aggregate output based on the multiplier.

Second, , even if capitalists consume their profits in high living rather than investing, they do not (as a group) suffer a reduction in profit income. As far as capitalists' income is concerned, it is maintained independently of how it is spent -- or as Keynes put it (1930), capitalists' profits are like the widow's cruse which cannot be emptied no matter how much is taken out of it.

The modern post-Keynesian approach

The modern PK approach to income distribution stresses:

1) The control of investment and thus of growth by the recipients of profits (either entrepreneurs or large corporations) and the control of prices by producers (oligopolistic corporations).

2) The dependence of the rate of change of output per worker on the rate of gross investment and technical progress.

3) The interdependence between the growth of output on the one hand and the distribution of income between wages and profits on the other (where that interdependence affects the willingness and ability of entrepreneurial organizations to carry out investment).

PK theory develops these points by using the same classification of economic aggregates as Keynes in the *General Theory.* The exposition of this approach can be simplified, and its link to classical theory be demonstrated, by invoking two assumptions about the propensity to consume out of different types of incomes. Hence the assumptions:

1) All wages are spent on consumption (wage or necessary) goods. It gives rise to a consumption function for which, given the money wage, consumer expenditures are a function of the level of employment.

2) All profits are used to purchase new investment goods. This corresponds to the idealized classical entrepreneur who ploughs back his profits to increase the family business;

and it gives rise to an investment demand function in which investment and saving is equal to earned profits.

54 If the analysis is further simplified by aggregating output into the categories, consumption goods and investment goods -- with each type produced in an identifiably different sector of the economy -- it is possible to examine the flow of goods and of incomes between the two sectors.

Keynes also is followed in his use of the catch phrase, animal spirits, to indicate that decisions to invest were based on a more complex set of factors than just accrued profits or the availability of finance. To make the analysis tractable it also is necessary to assume a "given psychology of the public" and given technical conditions.

Then, the amount of investment and the ruling technology determine the level of employment and the division of labor between the production of wage goods and the production of ~~consumption~~ investment goods.

The technical conditions and the existing capacity also then determine the total output of each type of good....

55 In the wage good sector, demand is equal to the wage bill in both the consumption and investment sectors. Hence its receipts will exceed its wage costs by an amount equal to the wage bill in the investment sector. The excess provides funds for the purchase of investment goods by the wage good sector.

Producers in the investment goods sector will also demand investment goods for their own use. The sales of this sector to firms in the wage good sector must cover the costs of production, so that all and any additional investment goods produced for its own use represent the excess of sales over costs -- that is, they represent the profits in the investment goods sector.

The profits of both sectors combined must then be equal to the value of the net investment goods produced, while the real value of wages (that is, money wages adjusted to the amount of wage goods produced) must be equal to the amount of wage goods produced. Here the distribution of income between wages and profits is mirrored by the division of national output between wage goods and investment goods (and, given the technology, by the division of labor betweeen the investment and the wage good sectors).

A higher proportion of investment in total output, causing employment in the investment sector to be higher relative to that in the wage goods sector, then leads to a higher share of profits relative to wages in national income, and vice versa.

56 The foregoing owes more to Keynes than to Kalecki, since it starts with investment and goes through employment and prices to distribution. Kalecki, on the other hand, initiated his investigation by recognizing the ability of firms to determine the margin of prices over costs, reflecting the "degree of monopoly." Given the firms' decisions on the level of prices relative to average prime costs, the equilibrium level of employment and the level of expected profits would both be determined with the latter determining the investment decision of firms that would, in turn, determine the division of national income between wages and profits.

PK approach takes into account both of these factors -- the influence of investment on prices (Keynes) and the influence of prices on investment (Kalecki).

Much of the recent PK literature has been concerned with the investigation of the relation between the setting of prices on current output and the decisions about future productive capacity, along with the effect these two decisions have on the determination of the shares of wages and profits in national income.

Workers' savings

57 Spending profits on consumption (the widow's cruse) seems a simpler case than workers' savings.

It increases the demand for consumption goods to be higher relative to supply, thereby causing proportionately higher prices and profits and proportionately lower wages.

Workers' savings reduce the expenditure on wage goods relative to the expenditure on investment goods and thus, over time, lead to a fall in the relative price of wage goods, an increase in the purchasing power of workers, and a rise in the real wage.

But allowing for savings out of wages produces an additional complication, for if workers save, it must be for some purpose -- to purchase income-producing financial assets, for example. They must then share in aggregate profits either directly or indirectly in terms of dividents or interest received. Workers would then receive combined incomes composed of both wages and profits so that the real value of the money wage must be distinguished from the real value of the workers' combined incomes. However, Luigi Pasinetti (1962) has shown, as long as the analysis is limited to the distribution of income between profits and wages as categories of income, the existence of savings out of wages makes no difference to the results. The savings behavior of workers does, however, influence the share of their aggregate combined incomes in the total national income.

58 Extension of Pasinetti's analysis to case of many classes of combined different sources of income.

Implications of the analysis

The PK theory of distribution of income highlights the role of investment, employment, growth, and prices in the division of national income. It contrasts with the orthodox theory by showing that the incomes earned in society can be expalined independently of any direct relation to individual or class productivity.

Income differentials are thus neither natural nor economic facts but the result of social and political custom and decisions, as well as market power.

At the same time, by demonstrating the relations among growth, distribution, and prices (or the mark-up of prices over costs) // 59 // the theory shows that there will necessarily be strict relations among the rate of growth of the economy, the distribution of income between the saving and nonsaving classes, and the price level. Policies to influence any one of these factors can be expected to have an impact on the other factors simultaneously.

References to PK papers of productivity by Edward Nell (1973), by Garegnani and by Sraffa (1960), and by Paul Davidson (1973).

59 While such a position on productivity suggests that there are no economic obstacles to a more equitable distribution of income, it does not imply that profit can be eliminated, nor than income equality can be treated independently of other factors. At the aggregate level, the theory shows that, given the state of technical knowledge, any desired growth rate requires a particular utilization of the economy's resources for investment. The remaining resources then are available for consumption. At the same time, nominal incomes must be distributed such that total incomes less expenditure on available consumption goods equal the value of aggregate investment. Yet there is no presumption that any particular distribution of income between wages and

CROSSOVER THEOREM

profit, or any particular distribution of particular incomes is necessary to achieve this result.

Finally, it is common for those who operate within a PK framework to recommend the use of incomes policies
60 as a means of controlling inflation. This stems from the basic proposition that, for any given rate of growth and associated saving-investment pattern, the level of prices is primarily determined by the level of wages or, more directly, wage costs per unit of output. Thus, given the mark-up of price over costs, if unit costs can be kept in step with production, prices should be relatively stable.

At the same time, the theory shows clearly that such policies also imply a definite distribution of income among various groups in society. Incomes policies thus affect not only prices but also the distribution of income. From this perspective, wages policies cannot be justified independently of an investment policy to assure the full utilization of the economy's productive capacity and labor force. These are, of course, not only economic questions concerning the structure and functioning of labor and commodity markets; they also are social and political questions that lie at the heart of political economy. The point of the PK approach is that it is no longer sufficient to appeal to the impersonal forces of perfectly competitive markets to justify economic conditions.

Policy Implication

69f. PK theory does not provide a single answer to the question of the economic incidence of taxation; rather, it
70 provides a framework for the examination of this question -- a framework that contains essential features of the world in which we live. It makes clear that the incidence of taxation cannot be determined without reference to the wider question of the distribution of income. Here PK theory points to the conflict between workers and capitalists over income shares. -- a conflict whose outcome is more favorable to capitalists if firms can establish high mark-ups and high levels of investment expenditures. Workers try to improve their share by bargaining for higher money-wage rates, but this will lead only to an increase in their real-wage rates and income shares if firms are unable to maintain their mark-ups. Inflation is one of the symptoms of this conflict over income shares, as firms raise prices in an effort to restore their mark-ups on the higher wage costs. Increased government expenditures -- even if matched by an increase in taxes -- could set off a renewed round of price and wages increases, as the various groups in the economy try to shift to others the burden of the increased taxation.

Vision

72 The simplest way to capture the essence of the orthodox classical vision of the structure of the enterprise economy is to call to mind the simple but profound picture of the familiar "circular flow" of inputs and outputs, along with its message of an integrated market-price system. This system (1) links together various output markets of goods and services, (2) links together various markets for ~~for~~ resource inputs, and (3) gives overall coherence to the whole by coordinating the output side of the system's flows with the input side.

73 What is of central importance at this point is not that economic rationality always prevails in the marketplace, but rather that market dynamics show no systematic tendencies that would cause economic actors to behave in a perverse manner regarding the principle of the rational (substitution) of the cheaper for the more expensive. For such a perversity would negate the model's central message and vision, that a
74 tendency toward coherence and order in matters economic is inherent in the system.

74-79 The reswitching or double switching anomaly
78 As a result of these concessions on the theoretical front the battle has now shifted to the arena of technical testing. As Charles Ferguson concludes in his survey of neoclassical theory (1969): "The question that confronts us is not whether the Cambridge Criticism is theoretically valid. It is. Rather the question is an empirical one or an econometric one: is there sufficient substitutability within the system to establish the neoclassical results?" As all who have reached this juncture will know, econometric hypothesis testing will neither quickly, nor easily, if ever yield unambiguous answers to this question.

79 Ferguson went so far as to state that: "Until the econometricians have the answer for us, placing reliance on neoclassical economic theory is a matter of faith. I personally have faith; but at the present the best I can do to convince others is to invoke the weight of Samuelson's authority."

81 What if... neoclassical production theory... is found to be nonoperational in the result-oriented world of policy?

In this eventuality... although the modern market economy is ordered in some way... the essence of critical relationships, particularly those on the production side, is not ordered in any meaningful sense. An economy so unexplained is obviously not predictable and thus not amenable to the current "means-end" techniques of guidance and control. That is to say that there would be no reason to expect that any particular policy actions (means) would lead to desired results (ends) with any calulable degree of certitude, perhaps even with respect to direction of change. ... would give rise to a situation wherin the current means-end approach to policy making would turn out to be either irrelevant or even counterproductive vis-à-vis desired ends.

188 Jaffé, William, "The normative bias of the Walrasian model," Quarterly Journal of Economics, August 1977.

82 Mark Blaug, in his economic theory in retrospect (1962), has urged that we should remember "... that nearly all [orthodox] economics nowadays is Walrasian economics."

83 And most economists, if queried, would be inclined to accept the statement that what Walras essentially did was to articulate the notion... of how an interrelated market economy could be expected to function automatically given the idealized situation of perfect competition....

The question at this juncture is, Does this vision, the essence of this idea-system, square with Walras' own, and with what he thought he was doing in articulating his formal scientific model?

84 Walras' purpose according to Jaffé was not to describe or to analyze a real-world system, even under stringent assumptions. His goal then was not positivistic; rather it was essentially normative. Walras was attempting to find out whether an economic system based on conditions that to his mind constituted economic justice, both in exchange and in distribution, could exist at ny given time.... As Jaffé puts it: "Walras's aim even in his "pure economics" was prescriptive or normative rather than positive or descriptive. His object was to formulate [invent?] an economic system in conformity with an ideal of social justice."

87 ... this essay will attempt to place Sraffa's work in proper perspective in relation to Post-Keynesian theory. It will cover.. the development of Sraffa's analysis, the distinction between his representation of the classic analysis, based on the notion of a "surplus," and the neoclassical vision, and some specific results of his analysis -- in particular the distinction between basic and non-basic commodities, and the standard system.

These various features of Sraffa's analysis fall within the classical tradition, but this does not mean that they are indissolubly connected to nineteenth-century economic conditions. In fact... post-Keynesian pricing theory, with the importance it attaches to the mark-up above costs, can be accomodated within the framework of Sraffa's analysis. While there are many other issues still to be resolved before the Sraffian and post-Keynesian // 88 // approaches can be fully integrated, it is along these lines that a new mode of economic analysis, with far-reaching political implications, is being worked out by a number of economists all over the world.

Development of Sraffa's analysis

88 But these two principles (increasing returns and decreaasing returns), as Sraffa noted, were originally introduced into political economy for two quite different purposes. ... increasing returns was based on the enhanced productivity that was thought to be derived from the effect which any greater division of labor has in expanding markets, and therefore was related to the theory of accumulation presented in Adam Smith's The Wealth of Nations. ... decreasing returns was associated with the differential rent that was thought to arise from the extension of cultivation to less and less fertile lands, and therefore was related to the theory of distribution developed in David Ricardo's Principles. [Sraffa found an inconsistency in uniting concepts from disparate sources within Marshall's partial equilibrium analysis with its caeteris paribus assumption.]

Between 1925 and 1960, when Sraffa's Production of Commodities
89 by Means of Commodities appeared, Sraffa expanded the scope of his criticism of neoclassical value theory while working to perfect his analysis of prices and distribution along classical lines.

Ricardo's problem was that prices depend on how the national surplus product is distributed among social classes, that is, mainly between betweeen wages and profits, while the surplus itself cannot be measured without knowing the prices of the commodities that make it up. In <u>Production of Commodities</u>..., Sraffa solves the problem of circularity by showing that "the distribution of the surplus must be determined by the same process and at the same time as are the prices of production." It is represented by a set of simultaneous equations representing for each product its costs and the profit it yields. The entire set of equations can be regarded as showing the prices which must prevail if the system is not only to yield a surplus but also to reproduce itself over time. The distribution of the surplus can be determined in one of two ways: 1) by assuming as the classical writers did that the workers receive only a subsistence wage, so that all the surplus becomes the profits
90/ of capitalists,/or 2) by assuming that part of the surplus is distributed to workers in the form of wages that exceed the subsistence level. But what is added to wages is subtracted from profits. Changes in the distribution of the surplus between wages and profits imply changes in relative prices because of "the inequality of the proportions in which labor and means of production are employed in various industries." Thus prices are determined by the technological conditions of production and by the manner in which the surplus is distributed between wages and profits.

<u>The concept of surplus</u>

Sraffa's analysis as outlined above is based on a concept which was central to classical political economy, from its origins in the seventeenth-century workd of William Petty to the nineteenth -century writings of Ricardo and Marx. This is the concept of surplus -- that is, the excess of the quantities produced over the quantities of the same commodities required for their production. The recognition of these intellectual antecedents allows us to outline the conceptual framework within which Sraffa's analysis of prices and distribution emerged.

Productive economic activity was conceived by the classical economists as a circular or repetitive process. Each cycle, that is, each period of production (say, a year) begins with given amounts of the various requisite commodities at the disposal of the producing units. These commodities are then utilized during the production process either as a means of production or as a means of subsistence for the workers. At the end of the period, in the system as a whole, there is an excess or surplus, which (assuming subsistence wages) is distributed to the two dominating classes of society, either to the capitalists as profits or to the land lords as rents.... 91 The market distribution of output therefore appears as a particular stage in an ever revolving cycle of production and reproduction. At one and the same time, the market ensures the redistribution of commodities from the firms which produdced them to the firms which will utilize them as means of production, and also realizes the "realization" of profits and rents (and wages if not paid in kind), allowing capitalists and landlords (and possibly workers) to choose their preferred commodity mix.

The set of exchange ratios (or relative prices) which are thereby established in the market must satisfy two conditions. They must be such as to ensure the redintegratinn of the produe-tive process (that is, they must cover the costs of production of all firms) and at the same time they must be compatible with the principles regulating the distribution of the surplus product within the two classes of landlords and // 92 // capitalists. In the Sraffian analysis, as in the Ricardian theory, these principles give rise to differential rent among landowners on the basis of the different fertility of the lands and to a uniform rate of profit on the capital advanced in all sectors (an analytical hypothesis which corresponds to the assumption of free competition).

The neoclassical approach

The conceptual background, which is common to classical economists and to Sraffa, was replaced by a completely different one with the advent of neoclassical (or marginalist) theory, which has been for the past century, and still is, the dominant paradigm. The basic classical vision of production as a circular process was replaced in neoclassical theory by the conception of a one-way process, starting from the avilability of scarce

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resources

and ending with the satisfaction of consumers' tastes. Economics was to become an exact science like physics, concerned with the optimal allocation of scarce resources among alternative ends. Within such a framework, the objective approach to value (based on the physical costs of production) which prevailed in classical political economy was supplanted by a subjective approach, based on consumers' tastes (utility maps). The concept of a surplus over the inputs necessary for reproduction disappeared; the theory of distribution was no longer concerned with the division of such a surplus among thleading classes of ~~x~~ society, but rather became the particular application of a price theory, related to the "prices" of the various "factors of production" (land, labor, and capital in the first instance, but all the various physically different means of production in the more rigorous "general"version of the theory). Relative prices came to be interpreted as "indicators of relative scarcities" of the various goods, instead of being ~~b~~ viewed as the ratios to which a regular repet~~x~~ition of the production process was linked.

the leading

\#

All the major exponents of marginal theory... tried to expalin the determination of the profit rate... within the general frameworkd of their theories. It was asserted than an increasein the price of capital (the profit or interest rate) would bring about an increase in the supply of, ~~capital~~ and a decrease ~~a decrease~~ in the demand for, capital which does not depend on how income is distributed between wages and profits. Straffa in Production of Commoditiies... that such a measure cannot exist. A similar argument is to be found in the work of Garegnani (1960).

Neoclassical discussion ignores Sraffa and Garegni to argue against Joan Robinson's aggregate version of the argument.

The classical problem

Sraffa's book not only provides the basis for a critique
94 of neoclassical theories; it also contains an // 94 // analysis of prices along classical lines. To two classical problems Sraffa gives a definitive solution: 1) the distinction between necessary and luxury commodities; and 2) the definition of an invariable~~x~~ standard of value.

Basic commodities are those that enter directly or indirectly into all processes of production. Nonbasic commodities are those that do not serve as means of production or which are used directly or indirectly in only a limited number of processes. A change in the price of basic commodities involves a general change in prices; a change 9n the price of non basic has not this implication.

While strictly valid only in formal analysis, this distinction is probably a tool whose cautious use might prove helpful in a number of policy problems.

The second problem regarding the standard of value is twofold: variation may arise from a change in the method of production; and it may be caused by a change in the distribution of income. The first member requires the definition of a an "absolute" standard of value, such as labor contained; the second is solved by Sraffa's "standard commodity."

The standard commodity is a composite good with its components weighted by the proportion of the goods required to produce it.. The standrad commodity therefore has the same technical coefficients as the whole of its ~~xx~~ means of production; and as a result a change in ~~xxxx~~ wages will, in the case of the standard commodity, be offset by an equal and opposite ~~x~~ change in profits./ In this way, the standard commodity serves as a baseline against which to measure the effect that a change in the distribution of income between wages and profits has in relative prices..

96/

Competition and oligopoly

96 Under the oligopolistic conditions which prevail in manufacturing, money prices are fixed by dominant firms acting as price leaders. These price leaders add to unit costs a mark-up designed to cover fixed costs abd to allow a certain ~~x~~ unit rate of profit. The higher the barriers to entry in the sector under consideration, the higher the rate of profit following the mark-up formula.

This mark-up is not discretionary. Joe Bain 1956, '58, and Paolo Sylos-Labini have shown that the mark-up rests on the barriers hindering the entry of competitors. These barriers may be technological (the mingmum size of plants needed to secure minimal costs) or they may be due to social and institutional factors ~~xxxxxxx~~ (eg brand loyalty).

Such factors, however, merely limit but do not preclude entry into the sector. The dominant firms are therefore restricted in their quest for maximum profits by potential competition, and they are able to obtain a rate of profit higher than the one prevailing in competitive markets only wibhin a limited range.

With this fact in mind, Sraffa's analysis, though conducted under the competitive assumption of a uniform rate of profits, is not incompatible with modern oligopolistic conditions; and indeed can readily be integrated with non-neoclassical theories of oligopolistic behavior. Moreover, Sraffa's rejection of marginal theory is a necessary preliminary step before a complete and adequate explanation of aggregate economic activity can be offered. In fact, after considering the implication's of Sraffa's analysis, it would appear that the problem of aggregate demand is best handled as two separate problems: one, the problem of determining levels of output
98/ (which/Sraffa takes as given, and so logically prior to to the problem of prices); the other, the problem of "realization", or how the sale of quantities produced can be assured. This opens the way for the introduction of the Keynesian problem of effective demand which coincides with, and offers a possible solution to the first of the two problems just mentioned. It would thus appear that Sraffa's analysis offers a basis for a theoretical integration of the classical, Marxian, and post-Keynesian traditions.

Policy implications

The main impact is at the ideological level. ... competitive prices are seen by marginal theory as providing an optimal solution to an eternal problem, that of scarce means relative to ends. This mode of analysis also extends to the problem of distribution, with the variables, profit rate and wage rate, seen as the prices of the "factors of production." A deviation in the real wage rate from the optimal level (eg a rise due to trade unions) is bound to provoke unemployment. Under such conditions there is a natural and optimal level of the distributive variables, and the trade union's struggle over the distribution of income loses all meaning [in marginalist eyes]. The implication [to marginalists] is that the distribution of of income cannot be altered, through political activity, without the material conditions of life being adversely affected.

This ideological implication of the marginal analysis

99 together with the theory of value and distribution // 99 // it relies, must be viewed with skepticism in the face of Sraffa's criticisms. The way is thus opened for an alternative analysis of distribution, centered on the opposition of wages and profits. This has widespread consequences for economic policy. As an example, the Sraffian wage-profit relationship and the distinction between basic and nonbasic commodities can be used to clarify a specific problem relating to incomes policy, this being the importance of the basket of wage-goods chosen as the basis for escalator clauses.

At the same time, Sraffa's solution to the classical and Marxian problems of how prices of production are determined, and their relationship with the distribution of income between wages and profits, clears up one of the main difficulties in the classical tradition. This points to the possibilityof developing a new political economy along the lines, and within the limits, indicated by the classical economists and Marx; that is, by taking into account the historically relative nature of the capitalistic mode of production and the class struggle inherent in it.

100 ... it is possible to combine some widely agreed upon tenets of post-Keynesian thought, such as the importance of the oligopoly sector, the nature of the technology in industrial countries, and the process of price formation by firms, with the work that has been done by American institutional economists, particularly with regard to segmented labor markets. The result of this synthesis is a fairly comprehensive analysis of the labor market that largely dollows Keynes in its approach to the demand for labor, and the segmented labor market theorists in its approach to the supply of labor. A PK analysis of this sort leads to a conclusion radically different from the orthodox neoclassical theory. This is that neither the demand for labor nor the supply of labor depends upon the real wage. It follows from this that the; that the labor market is not a true market, for the price associated with it, the wage rate, is incapable of performing any market-clearing function, and thus variation in the wage rate cannot elimiiate unemployment.

The orthodox theory of wage determination and unemployment, 101-104.
Keynes critique of the orthodox theory, 104, PK, 105.

Production and the demand for labor

106 The PK argument relating the demand for labor to production has three components: the first conceptualizes the institutional nature of the business sector; the second characterizes the prevailing technology; while the third describes the pricing decisions of firms with market power. The demand for labor can then be related to the level of output that firms plan to produce without reference to marginal productivity theory.

The simplest assumption about the industrial structure of the United States that is reasonably close to reality is Robert Averitt's view (1968) that there exists a dual economy... consisting of a set of core industries and a periphery.

Characteristics of these two and their operations, pp 107-11

Labor supply and underemployment, 111-115.

112 Employment is important, therefore, for the income it generates, for the contribution it makes to the individual's self-respect, and for its impact on the skill acquisition process. Very few households can afford to supply less labor

as real wages decline; and an excess supply of labor cannot be eliminated in this manner.

The PK analysis of unemployment draws heavily on the analysis of segmented labor markets advanced by radical economists like David Gordon (1972), Michael Reich and Richard Evans (1993), the analysis of internal labor markets by Peter Doeringer and Michael Piore (1971, and the job competition model advanced by Lester Thurow (1975).

Description of segmented labor situation, pp. 113-115.

Summary

115 The labor market is not a market as that terms is usually understood, for the labor market does not possess a market-clearing price mechanism. Variations in either money wages
116 or in the real wage rate are unable to assure a zero surplus supply of labor, and thus eliminate unemployment. In the context of 1) an industrial structure that is largely oligopolistic, 2) fixed technical coefficients of production, and 3) mark-up pricing, the demand for labor depends on the level of aggregate economic activity. It has little if anything to do with the marginal product of labor. The supply of labor, meanwhile, depends largely on demographic and other sociocultural factors, though it is somewhat responsive to changes in employment opportunities. When aggregate demand falls below the potential output of the economy and unemployment increases, the personal qualifications required for entry or advancement to a job in a given stratum of the labor market increase; and the educational gains of women, blacks, and others are devalued in the ensuing credentials inflation. The result is a queue of those waiting for access to the better jobs, or even to any job at all, that cannot be eliminated by any decline in real wages.

While the demand for labor relative to its supply plays a majorrole in establishing the level of money wages by strengthening or weakening labor's bargaining position, the growth of output and the solidarity of the trade union movement have an even larger impact.

Of greater importance than the level of money wages is the level of real wages. This, moreover,depends not only on money wages but on prices as well.... In periods of economic growth, if the margin above average variable costs rises as firms try to generate increased internal funds with which to finance investment, prices will rise relative to money wages. The growth of real wages may therefore be depressed below the growth in average productivity of labor despite the rise in money wages. Thus, while conditions of slackness or tightness in the labor market play a role, neither money nor real wages can be said to be uniquely by the demand for and the supply of labor.

Policy implications

The volume of employment depends on aggregate demand factors, not on wage rates. Techniques for regulating aggregate demand through gov't monetary and fiscal measures have been known since Keynes (1936). Reluctance to reduce unemployment through such means stems from the misguided view that a Phillips curve trade-off between inflation and employment exists.... Restrictive monetary and fiscal policies may keep unemployment high but they are ineffective in combatting inflation. The resulting stagflation (high unemployment and high inflation) is an all too familiar outcome.

From the PK perspective the primary cause ofinflation
is not excess demand for goods or labor, but rather
118 the conflict over how the available income and output
are to be distributed....

Finally, it must be recognized that whatever the rate of unemployment may be, the burden is not shared equally by all demographic groups. Layoffs and firings are associated primarily with the dead-end, lw-wage jobs characteristic of the secondary labor market. As a result, blacks, women, and others who are overrepresented in the secondary labor market experience a disproportionate amount of unemployment as well....

119 Again, difficult political and sociat questions are
involved, for a substantial reduction in low-wage employment
will require fundamental adjustments in consumption and
production patterns throughout society.

(While PKers have not worked out their own theory of money, it is possible to list the points on which they reject neoclassical views)... to wit:

the serious recognition of historical time;
the consequent rejection of general equilibrium theory;
the centrality of finance for investment behavior;
the endogeneity of the money stock resulting from the need of central banks to validate the growth of money wages; i. e., the interdependence of financial and industrial expansion.

Historical time

120 A sharp distinction must be made between historical
121 and logical time. Logical time can move either backward or forward, historical time can only go forward. The essence of an economy that operates in historical time is that the past is given and cannot be changed, and that its future is uncertain and cannot be known.

A monetary economy, Keynes argued, with modern financial institutions behaves in a manner fundamentally different from a "real exchange" -- i.e., a barter economy.

Hence the very concept of a position of balance towards which a system is tending, and from which there is no tendency to change, is inappropriate to historical time (in which the future is uncertain and cannot be known).

122 Thus post-Keynesians, like many mainstream economists, have abandoned general equilibrium analysis for Marshall's partial equilibrium framework, with emphasis on the events of the disequilibrium adjustment process. With regard to money PKers reject the comparative-static proposition that money is neutral, in the sense thatan exogenous change in its quantity, once all adjustments have run their course, produces a proportional change in all prices, leaving real phenomena unchanged. Rather they focus on the events of the transitional period, in which the world is continually enmeshed, during which a change in the supply of money may have a powerful real effect on output and employment.

Money, prices, and wages in an uncertain world

Why do people hold money instead of financial assets or service-providing physical goods? Because they render services associated with the uncertainty of historical time.

An indication of their magnitude may be found in the fact that money continues to be held and used even in countries where the annual rate of inflation.. approaches triple-digit figues.

123 In an uncertain world money serves as a mechanism for deferring decisions and avoiding commitment. Modern money can function of the means of exchange only because the community knows that the state will enforce all contracts specified in terms of legal tender. Money buys goods, goods buy money, but with few exceptions goods never buy goods.

In a world of perfect certainty, in which the price of everything was known, all goods would be perfectly liquid, and there k would be no need for a special money. It is the uncertainty inherent in historical time, rather than the lack of synchronization between expenses incurred and payments received, that is the necessary and sufficient condition for the existence of money.

As Keynes (1936) insisted, it is the expectation of stable, i. e. sticky, momey wages that encourages the public to hold money as a temporary abode of purchasing power.

124 PKers view money wages as determined in the short run not primarily by supply and demand as is the price of peanuts and other commodities, but rather as a result of the administered price process between employers and employees, where both explicit and implicit labor contracts are first set up and then prevail over some future period.

Money wages are inflexible downwards because if the implicit contract is abrogated and wages are reduced in the face of excess upply, workers will become resentful, their productivity will fall, and the employer will acquire a bad reputation. These implicit contracts are the reason why the concept of the "just wage" is still meaningful in labor negotiations. Labor as a factor in production is unique. Its productivity is not independent of the wage that it is paid.

125 Ifmoney wages can be regarded as exogenously predetermined in this manner in the short run, prices must adjust to money wages, rather than the reverse. It is thus real wages that are determined endogenously by market forces. Neoclassical writers hold money wages to be determined by supply and demand; and congruously conclude that increasing the quanity of money tends to modify all prices proportionately.

An endogenous money stock

PKers, in sharp contrast to monetarists, regard the stock of money as being essentially endogenous, responding and accommodating to changes in the level of money wages. Keynes (1930) insisted that money "comes into existence along with debts" -- i. e., the supply of money is related to production contracts and any debts which they necessitate. Money does not enter the system like manna from heaven -- or from the sky via Milton Friedman's helicopter. Nor is it the creature of the central bank's policies. The central bank determines the stock of legal tender, the high-powered money base. The public decides the amount of legal tender it wishes to deposit with the banking system and other near-bank financial intermediaries,
126 and the // 126 // banks decide the amount they wish to hold as cash reserves and the amount they wish to hold as earning assets. Conventional analysis assumes that because these ratios are stable, the money stock is exogenous. This point of view ignores completely the historical fact that the purpose of central banks has been to accomodate the stock of money to changes in the need of trade. Post-Keynesians rank the supportive responsibilities of central banks above their control duties.

Production takes time. In modern economies, production costs are normally incurred and paid prior to receiving any sales revenues. When current production costs simply duplicate those of the preceding period, present proceeds from past periods can be used to finance current costs. But in general, apart from the fantasy of the stationary state, this is not the way the world behaves. Wage increases raise business production costs. Even if production and sales continue at an unchanged pace, businesses will then require more working capital to finance their now higher-valued inventories of goods in process. Unless they are able to run down their liquid assets, they will have to increase their borrowing from banks. Business firms thus borrow in expectation of future sales revenue to finance higher current production costs. It is this endogenous nature of the money supply process that explains the observed close statistical correlation between changes in the rate of change of the money stock and changes in the level of money income.

It is often said that the heart of any economic system lies in its credit structure. It makes a difference whether banks purchase newly created financial assets
127 <u>127</u> (lending to finance deficit expenditure) or whether they simply purchase already existing financial assets (altering the liquidity com½osition of existing portfolios).

This leads PKers to focus on the credit side of bank intermediation, incontrast with the monetarists who argue that it is some variant of the money stock which is the critical variable. When banks purchase a previously existing financial asset (marketable security), the effect is to change the composition of the private sector's wealth portfolio. When banks grant loans (purchase a newly created nonmarketable security), the effect is to change the total assets and the total liabilities in the priavate sector. In the first case there is no monetization of a newly created debt; in the second, there is.

<u>Finance and investment behavior</u>

PKers view business cycles, economic growth, and the factoral distribution of income as being governed by the same key determinant -- the rate of investment. Rather than conceiving investment as being governed by saving, as in the orthodox neoclassical model, PKers follow Michal Kalecki (1966) in arguing that investment in part generates the profits necessary to finance itself. In modern capitalist countries the funds for investment are obtained largely out of internal cash flows -- i. e., depreciation charges and retained earnings. Thus PKers further emphasize the fundamental role played by advanced credit instruments and institutions in the investment process that characterizes developed capitalist economies.

While conventional analysis emphasizes the importance of the expected return, PKers, since they regard the future as uncertain, follow Keynes in stressing "animal spirits." in the investment process and, further, the independence of investment from decisions to save. If businessmen wish to invest, and bankers will accomodate their demands for credit, it is investment that determines saving rather than the reverse. The endogenous nature of the money stock permits

128 investment expenditures to be carried out independently of current savings flows.

Because modern economies operate in historical time, firms tend to follow past experience. So it is that capitalist economies give rise to a growth process which is inerently cyclical. During prosperity, firms are induced to borrow and increase their debt (to equity) ratios to finance new capital expenditures. As long as the expansion proceeds, the leaders in the process are rewarded by greater profits. Gradually, the accepted (subjective) credit standards adjust, but as carrying costs and debt ratios rise, the financial structure (objectively) becomes increasingly
129 precarious and fragile. Eventually a downturn in business activity is severe enough to impair confidence, credit standards are raised, and a liquidity panic will, unless offset by gov't deficits and central bank accomodation, lead to a general decline in asset values. In this way the stability and and posperity of an expansion breeds the instability and collapse of the crisis.

Since balanced growth is inconsistent with the very existence of financial assets in an uncertain world moving inexorably through historical time, PKers rather share the Marxist view that business cycles are an inherent aspect of real world capitalist systems, the result of a failure to coordinate economic activity from without. It is this lack of planning which leads to disporportions and mismatches in production and consumption. Crises can be viewed as serving a functional role, helping to solve the problems of accumulation that become acute during the expansion phases.

emphasis mine

There are several Marxist crisis theories. Put most crudely the PH view runs like this. During booms the working classes gain strength as full employment is approached, amd workers use this enhanced power to obtain higher money wages and better working conditions. They are also able to change jobs more frequently, to prevent speed-ups by employers, and to take life a little easier. By so doing they make life less enjoyable for the class owning and controlling capital goods and organizing the production process. An economic crisis, by producing unemployment, serves to

s retore the profit conditions necessary for the continuation of the capital accumulation process. Each crisis solves
130 its own particular problems // 130 // but the solutions always generate new problems, which then require further solutioons. It is in this sense that PK economics can legitimately be said to have a significant post-Marxian component. But PKers generally avoid Marxian metaphysics and ideology. They are not wedded to the dialectical process and have little to say about class struggle, alienation, or exploitation.

The causes of inflation

131 For modern PKers the rate of inflation is determined primarily by the rate of increase of money wages relative to productivity. Over wide sectors of the economy, prices are largely cost determined, based on a mark-up over unit labor costs. The main exceptions are agriculture and raw materials. The mark-up pf r.ces over unit labor costs will be constant over time for the economy as a whole so long as the capital and labor shares of national income are constant, irrespective of the assumptions governing price-setting behavior.... A rise in raw material prices, a rise in the share of national income going to gov't, and an increase in the rate of investment expenditures will all tend to lead to a higher mark-up, reducing real wages by driving a wedge between unit wage costs and prices.

To the extent that labor is able to build the expected rate of inflation into its wage settlements, the ensuing rate of inflation will be governed by the extent to which money wage rates have risen more rapidly than average labor productivity.

132 The growth of the money stock?

PKers maintain that the high-powered money base as determined by the central bank, while admittedly exogenous in the control sense, is endogenous in the real world and hence in the statistical sense.

Assuming considerations of variable velocity can be safely ignored, the growth of the demand for money can be represented tautologically as

(1) $\dot{M} = \dot{p} + \dot{y}$

where M is the demand for nominal money stock, p is the price level, and y is real output, while ' denotes "velocity of."

130 Monetarists assume that the growth of real income, $\dot{y}$, can be treated as a constant trend and that the money market is constantly cleared. It follows that the rate of inflation, $\dot{p}$, is the excess of $\dot{M}$ over $\dot{y}$. Hence Friedman (1969): when $\dot{y}$ increases from 3% to 5% per annum, increase $\dot{M}$ proportionally, and price stability will follow.

The PK view of inflation is that its rate increases in the measure that nominal wages rates exceed average labor productivity; so that approximately

$$\dot{p} \doteq \dot{W} - \dot{w} \quad (3)$$

where W is the average level of money wages, w is the average level of real wages.

131 To proceed from average real wages to average labor productivity (average Q, realGNP), note that the average growth of level of real wages depends on the growth of labor productivity, the ratio import prices to domestic prices, the levels of indirect taxation and profit mark-ups. If we assume that the mark-ups remain constant, real wages will grow with the rate of labor productivity. Hence,

$$\dot{p} = \dot{W} - \dot{z} \quad (4)$$

where $\dot{z}$ is the rate of growth of labor productivity.

Now restric_tive monetary control means that M does not increase as rapidly as p. Hence to maintain equation (1), real output, $\dot{y}$, must decline if prices are to remain inflexible downwards.

if/ Similarly,/the rate of inflation exceeds the rate of growth of money wages, average labor productivity will have a rate of decline.

The control of the money supply involves higher interest rates, the decline of real output points to unemployment, to decline of real income is a depression or recession.

On the other hand, if the monetary authority decides to respond to "reasonable" demands for credit and thereby avoid a rise in unemployment and interest rates, the rate of growth of the money stock will be determined by the past rate of growth of money wages. In equation (4), $\dot{W}$ keeps adjusting to $\dot{p}$.

134 This position is substantiated empirically. Both the money stock and the high powered money base, at least for the United States, Canada, and the UK, are highly correlated over the post war period with the past rate of change of money wage rates.

Both a Keynesian demand inflation generated by spurts of investment or gov't expenditures, and a cost inflation generated by increases in wage and profit demands, have to be and consequently are validated by the monetary authority. This is a practical not a logical necessity.

Monetary authorities are caught in a terrible dilemma. They can fulfill their obligation to resist depreciation of the monetary unit and protext fixed-income wealth-owners by abandoning their gov't's commitment to full employment, and permitting the unemployment rate to rise. But their overriding short-term commitment - in fact their very raison d'être - is to a stable and healthy financial system. It is this which induces them to make the reserves available to support all reasonable demands for credit, since the alternative would be financial chaos, spiraling interest rates, and a wave of bankrupt firms.

Some policy implications

As Keynes argued, economics is essentially a moral and not a natural science. It employs introspection and value judgments. Once there are major disparities in income distribution within a country, or among countries, the market mechanism ceases to function equitably, since it is heavily weighted in favor of the purchasing power of the rich. It is, for example, now increasingly recognized that economic growth does not automatically filter down to the poorest sections of a society.

135 One of the ways in which the market system systematically discriminates against the poor is the way in which it allocates the new credit associated with a growing money stock. They lack the collateral for bank loans within their national boundaries. And since the third world with 70% of the world's population received less than 5% of the international reserves created during 1970-75, a more equit-

able system of providing credit is needed, such as a Central Bank with an international currency and with access to its facilities based not on past affluence but on future growth needs and potential.

Another policy implication of post-Keynsian economics is the necessity of some form of social planning to resolve the problem of stagflation in modern capitalist economies. If price increases are generated by rising unit costs, the result of money wages increasing more rapidly than average labor productivity, then inflation cannot be countered effectivelyby conventional monetary or fiscal demand management policy. ni Dimished demand growth produces, not a fall in the rate of inflation, but a fall in real output and e a rise in interest rates and unymployment.

Friedman's famous rule could in principle work, but at such tremendous cost of forgone real output and employment and with such a terrible punishment of innocent and be weaker parties, as to totally unacceptable....

136 Consequently, almost all PKers lean toward some type of incomes policy as the only feasible solution to the problem of stagflation. The chief problem with incomes policies as is by now well known is that no capitalist gov't has yet succeeded in devising one that will work over the long haul. Gov't imposed wage and price controls interfere with market allocation processes, and the resulting distortions rise exponentially the longer controls are maintained.

Perhaps the central political difficulty is that all stabilization policies have strong distributional implications. In the case of an incomes policy, the distributional aspect is made more explicit. As long as efforts to improve relative incomes take the form of increases in money wages, decentralized collective bargaining has a strong tendency to lead to inflation in all economies where the gov't accepts some responsibility for full employment.

The exceptions, Germany and Switzerland, discussed.

The alternative to such collective bargaining is the development of an acceptable policy of relative incomes --

not 137 only among wage-earners, but also between the recipients

137 of wage and nonwage income.... But.. In order for a modern capitalist system with collective bargaining to avoid stagflation, it becomes necessary to achieve a consensus about equitable relative incomes -- and it is precisely this which seems beyond our present political competence.

There is however one possible way out. When private decisions impose external costs on others, it is widely accepted that the gov't is justified in imposing a tax price, to force descision makers to internalize these costs. .... If corporations wish to negotiate labor contracts that raise wages, say, by 10%, this is a free country and let them do it.--- without price or wage controls. But because they are imposing an inflation cost on the rest of us, they should be asked to pay a tax on that part of the wage bill that exceeds the reduction of the bill from increased labor productivity. Such a "Tax-Based Incomes Policy" could also be applied as a carrot. Firms which grant wage increases and price increases lower than a stipulated amount could receive a subsidy.

If effective, such a policy would tend to freeze the
138 status quo // 138 //of the existing distribution of income between workers and capitalists. As a result it is particualarly difficult to choose an appropriate stage of the business cycle to implement it.... There is simply no good substitute for real competition in labor and product markets.

Other PK policies. Aduantages of this one politically.

Many PKers maintain that an effective incomes policy can only emerge out of a more comprehensive system of indicative planning...

Continuing and possibly increasing wage inflation -- the status quo. A slump and a massive rise in unemployment to keep money wage increases low. Or some form of incomes policy. These three alternatives exhaust the set. There are no other games in town.

139 PKers have no formal study of this subject comparable to the neoclassical. But one can discern the main outline pf an alternative to the prevailing theory of international trade in the work of Joan Robinson, Michal Kalecki, Nicholas Kaldor and other PKers building on Keynes and in the elments of classical theory emphaiszed by Piero Sraffa.

Two themes in PK theory

The two are 1) the social relations of production -- Marx's the mode of production -- and 2) historical time taken seriously. Both carry over directly into internat-
140 ional trade. Differences in the social relations of production lead to the two models: between advanced capitalist countires, and between an advanced capitalist economy and an economy producing some primary product, like food, with an artisan mode of production. Each of these to be elaborated below.

Taking historical time seriously means that the past cannot be changed and the future cannot be known. This affects both the above models and marks the difference between PK analysis and neoclassical thought.

Trade among developed countries

This model is based on Kalecki's work (1976) exhibiting business cycles of boom or bust as the normal state of affairs (140-141).

What happens when ww introduce international trade into a world of such manufacturing nations. From the point of view of one nation, exports tend to increase employment, output, and profits; imports tend to reduce
142 them. // 142 // The countries which have the lowest unit costs tend to develop a surplus on current account in the balance of payments since they are able to undercut other countries in foreign markets. This increases their profits and output. The higher levels of profits, in turn, provide the finance to expand capacity and install still more efficient equipment, which tends to make their competitive advantage all the stronger.

By contrast the countries which are relatively less efficient are likely to experience high unemployment and

and low profits and therefore tend to fall behind in the competitive struggle for markets. Robinson (1973) describes the new mercantilism that then emerges to guide public policy, "Every industrial country wants a surplus on current account. 'Export led growth' is the most convenient way of running modern capitalism. Who succeeds at any moment is accidental, largely depending upon historical circumstances and political and psychological influences. Success leads to success and failure engenders failure."

John Cornwall (1976): .. the most adequate theory, explaining export patterns and success advances, the neotechnology theory of international trade... with its emphasis on differences in technologies across countries, borrowed technology and R and D, the quality of entrepreneurship and investment outlays.

It is worth noting that this process may exist even with inflexible exchange rates. Consider the situation in which a country is falling behind in the competitive struggle and is therefore borrowing from abroad to cover the deficit on current account in its balance of payments. 143 The deficit is likely, under flexible exchange rates, to cause a devaluation of the country's currency. But this will tend to raise the prices of imported goods, particularly if the prices of the imported goods are fixed in terms of one of the efficient balance-of-payments nations... If the imported goods figure prominently in workers' consumption , then this result will set the stage for what John Hicks (1965) calls real-wage resistance -- resistance by workers to cuts in the purchasing power of their money wages. The workers strike, foreign contracts are lost, wages and unit costs measured in US dollars rise and the country is no better off -- indeed it may worse off than before devaluation. Recent economic history in the UK appears to fit this case nicely.

The firms in the countries which have a surplus on current account will have on average substantial profits to invest abroad (cf US in Canada, Japan in Australia). Whether it is a good bargain or not for the deficit countries depends on what is done with the finance. Two prob-

143 con'd lems faced by an economy dominated by foreign branch plants of international firms are that: (a) exports tend to be lower than they would otherwise be for a subsidiary does not compete with other subsidiaries of the same firm; and (b) unit costs tend to be higher so that customers pay higher prices, because plants are likely to be run well below capacity.

With the continuation of the foreign investment process for several decades, it becomes clear that a few international firms will eventually grow into exceedingly large corporations, whose powers rival and may even exceed those of national gov'ts. The emphasis on the role and the behavior of the firm in

144 the PK model model of international trade // 144 // seems to be well justified in the light of recent economic history.

Trade between developed and less developed countries

The second model represents countries that follow different modes of production and trade their respective products.

Kalecki (1943) distinguished "cost-determined" and "demand-determined" prices, the former of manufactured goods, the latter of raw materials and agricultural products. The difference arises because the supply of manufactured goods tends to be elastic since the firms are happy to supply more output at the same price, while the supply of agricultural goods tends to be inelastic, at least in the short period. The mode of production of manufactured goods is assumed to be capitalistic, and the mode of production of the agricultural sector is assumed to be like that of an artisan economy.

Kaldor (1976) has used this model to discuss a long range of phenomena observable from recent international experience, even though the model has its roots in the development models of the Physiocrats and the English

145 classical economists. If one assumes that labor productivity grows more quickly in agriculture than in manufacturing, the model predicts that there will be a tendency for the agricultural goods to fall in price relative to

145 con'd prices of manufactured goods. Since the demand for food tends to be inelastic, agricultural incomes will be lowered and there will be a movement of labor from rural areas to the cities. The facts of economic history are consistent with this story.

Kaldor has recently used the model in a short-period context to show how crop failures may lead to severe inflation and recession in the manufacturing centers. A crop failure pushes up agricultural prices and, since demand is inelastic, agricultural incomes rise. If the farmers save part of their incomes, there will be a decline in the demand for manufactured goods, since manufacturing workers have to spend more on food.. Employment, output, and profits in manufacturing all fall. If manufacturing workers resist the decrease in their real wages by seeking and obtaining increases in money wage rates, the prices of manufactured goods will rise, and the former change in relative prices will be reversed. Movements in the terms of trade (which should redress the imbalance) may simply cause inflation and unemployment. As Kaldor says, "... the emergence of shortages which should accelerate the growth of primary products through improvements in the terms of trade may lead instead to an inflation of manufacturers' prices; this tends to offset the improvement in the terms of trade, and by its dampening effect on industrial activity , worsens the climate for new investment both in the primary and in the industrial sector." Sidney Dell (1977) indicates that Kalecki's work for the United Nations (194[illegible]-54) arrives at similar conclusions.

146

The orthodox theory

The neoclassical theory of international trade runs parallel to its theory of trade in a closed economy. Prior to Keynes (1936) neoclassical theory distinguished the theory of value (or relative prices) and the theory of money. Alfred Marshall's Principles of Economics held that supply and demand determined relative values (prices), given the assumption of the full employment of all resources. The quantity theory of money, with the stock of money as the key determinant, was then introduced to explain the level of absolute prices.

146 On the <u>General Theory</u> Keynes held this to be a false division of the subject, but his point that the theory of value and distribution would have to be adapted to a monetary economy in historical time, was not taken seriously.

In the reconstruction of economics after world war II,
the subject was again divided into two parts: macro- and
microeconomics. Micro-combines Marshall's partial-equilib-
rium analysis with Walras' general-equilibrium analysis.
Macro- on the other hand lumps Hicks' (1937) interpretat-
ion of Keynes with the old quantity theory of money. The
two parts, taken together, constitute the "neoclassical
synthesis." The incompatibility between the parts (micro-
and macro-) is glossed over. The micro- assumes wage and
price flexibility so that a full-employment equilibrium
147 is assured, while the macro- explains // 147 // why the
economy may be at less than full employment equilibrium
for some time because of rigidities (i. e., it discusses
the short-term deviation of the economy from the full-
employment path and the process of adjusting from one pos-
ition of long-run equilibrium to another. Consistency be-
tween the two parts is maintained only by omitting the main
difference between Keynes and his predecessors -- the role
of uncertainty and of money in an actual economy).

Along these lines neoclassical theory of international trade distinguishes "the pure theory of international trade", which is micro-, and the "monetary" theory of international trade or, as it is sometimes called, "international finance," which macro-.

In the pure theory or micro- it is assumed that wage and price flexibility guarantees full employment of resources. ... The model, like other general equilibrium micro- models, simply assumes away all questions that Keynes thought to be interesting. The main development has been a gradual shift from partial-equilibrium (Marshall) to general-equilibrium (Walras) analysis.

As to the monetary side of international trade, prior to Keynes, Hume's quantity theory of money showed that a deficit in the balance of trade would lead to an outflow of money, a consequent fall in the price level relative to foreign prices, and a resultant restoration of the balance

147 of payments. Attempts to integrate Keynes' analysis of income adjustments into the analysis of international pay-
148 ments // 148 // has proved difficult....

It is easy to see that there are significant differences between PK and NC account of international transactions. The PK models normally are not in long-run equilibrium, the NC are. The former attempt to tell a causal, sequential story of how a particular historical process unfolds, the other does not. Institutions and the concept of a mode of production have a major impact on PK theory, while NC theory is so free of institutions that it is assumed to apply to all kinds of societies. In the NC monetary theory, since it incorporates elements from Keynes (1936), is closer to the PK, but there still are major differences. Primarily they are differences between PK and NC macroeconomics.

Policy implications

Though the PK theory of international trade is not well developed, one may, at some risk, draw policy implications out of the PK approach. The theme that emerges is that the problems of international trade are more difficult to solve than orthodox theory would lead one to believe.

149 One implication of the account of trade between // 149 // developed capitalist countries is that neither fixed nor flexible exchange rates may be able to solve the balance of payments problems of the countries falling behind in the competitive struggle for markets. If there is "real-wage" resistance as Hicks suggests (1965), then devaluation, if the prices of imports are set by strong-currency countries, may lead to pressure for higher money wages, and the resulting inflation will make the domestic country less competitive internationally and the balance of payments deficit larger.

Some PKers have argued for some form of incomes policy to bring the costs of production under control. But when wages are controlled and the domestic currency devalued, real wages fall. Workers react, strikes and slowdowns occur, and there may result a loss of foreign contracts and a further worsening of the trade deficit. There have been more ambitious proposals but Kalecki's analysis leads one to be pessimistic about their success.

149 Another implication of the "new mercantilism" which permeates international trade policy is that prospects for free trade are not good. While it may be in the collective interests of nations to have free trade, the competitive struggle for markets amongst countries make it unlikely that free trade will ever be fully realized.

That individuals acting in their own self-interest
150 may not // 150 // advance the welfare of all is a recurrent theme in the writings of Joan Robinson and Kalecki, but the flaw in the neoclassical argument for free markets was noted long ago by Tibor Scitovsky (1942). He showed that in a competitive market, while it appears to be in the interests of buyers to form a combine to turn the terms of tnade in their favor (the same applies to the sellers), the process of turning a competitive market into a bilateral monopoly can easily lead to everyone being worse off. To reverse the process is difficult.

A liberalization of trade is unlikely to improve the position of less developed countries. As Kaldor suggested (1976), events which force up the prices of primary products relative to manufactured goods will do so only temporally. EVentually the prices of manufactured goods, purchased by primary producers, will rise, and this will swing the distribution of income in favor of the developed countries. It would seem that to gain ground, the less developed countries must somehow jump over the technological gap that separates them from the more developed countries and set up their own manufacturing sectors.

154 PK theory, on the other hand, suggests that in a world where the future is uncertain, it is impossible to identify which future allocation path for natural resources will, in fact, be socially optimal or efficient, since the efficient or optimal path can only be defined for known future conditions. PK economists reject the idea that either economists or real world market prices can or do play the role of Delphic oracle. Instead, they hold it is the economist's function to analyze alrernative market and regulatory controls of resource production and consumption decisions, and then to explain the implications of these alternatives for production flows, prices, income, and the distribution of wealth and economic power. Economists, it is argued, should acknowledge their role as "soft" scientists providing advice to policy-makers regarding "hard" decisions. Moreover, even as soft scientists, economists should hesitate to suggest that policy should aim at (1) protecting consumers from paying more than the normal supply price for essential goods and services, and (2) excouraging "enterprise" and preventing "speculation" from dominating economic activities.

The role of user costs

One of the basic PK conceptual tools for analyzing the use of natural resources is the concept of user cost...
155 The concept of user cost can be illustrated as follows.

For any particular property, the fossil fuels in the ground are a fixed inventory (or exhaustible resource). The more of these fuels that are used today, caeteris paribus, the less will be available for future delivery. Consequently, a rational entrepreneur will compare the present value of expected profits for a forward contract sale at each possible future date with the profitability of selling that amount today. If profit-maximizing entrepreneurs are to produce for current sale, current marginal revenue must be expected to cover not only not only current marginal production costs but also the user cost in herent in all depletable resources -- namely, the highest present value of marginal future profits given up by producing that barrel of oil currently rather than in the future. If well-organized forward markets existed in the real world, producers of natural resources could readily use the forward prices to estimate user costs. However, forward markets for oil and other natural resources for days, months years in the future do not exist.... Instead, the only information available to producers in the history of the industry, the current situation, and the individual's hopes, fears, and expectations about the future prices of resources.

156 Since current expectations of producers about future prices relative to costs play the pivotal role, relative stability over time in prices and production of energy resources requires that most producers believe that the tomorrow will not be significantly different from the recent past.... If, even with competition, most producers expect a significant change in price relative to costs in the future, the current rate of exploitation will be accel erated (if user costs are on average negative) or retarded (if average user costs are positive).

Negative illustrated by huge East Texas oil fields.

163 PKers view the decision to utilize natural resources as similar to that disinvestment in capital equipment, while the search for new sources is merely a form of capital investment. These positive and negative investment activities dpend on the hopes, dreams, and fears of mortals -- or what Keynes called "animal spirits." And thus there is need to take seriously Keynes' admonition that there n "is no clear evidence from experience that the ivestment policy which is socially advantageous coincides with that which [is thought to be] most // 164 // profitable."

165 For the policy, not only in the United States but throughout the North Atlantic and Pacific Oceanic community of market-oriented economies, is based on the neoclassical paradigm in economics, a paradigm that is both pre-Keynsian and pre-scientific. In other words, it in-
166 volves // 166 // the same conceptual framework, formulated to demonstrate the self-correcting nature of market mechanisms, that Keynes had to overcome in his day.

Those who are accustomed to thinking of the policies which gov'ts have pursued since the end of WW II as "Keynesian" will be surprised by this statement. But that is only because they are confusing Keynesian theory with the neoclassical synthesis -- developed by Paul Samuelson and his colleagues in Cambridge, Massachusetts -- which has come to dominate the academic economics of the day. Under that synthesis, Keynes' argument (1936) that the economy may settle down at less than full employment is accepted, at least as a temporary result.... ... the gov't may well be advised to intervene through fiscal and monetary means to hasten the eventual return to full employment. But these concessions aside, the pre-Keynesian theory, with its emphasis on supply and demand determining price-and-quantity relationships under competitive conditions, is still regarded as an essentially correct analysis of the functioning of a modern, technologically advanced economy based on market institutions.

167 PK theory theory is still in its formative stage. While the broad lines of the new paradigm can already be discerned, much of the detailed argument remains to be
is/ worked out. What it offers/the prospect of uninhibited inquiry, and not the promise of quick and simple solutions to long vexing problems. Indeed, the theory's first important contribution will be to free economics as a discipline from the intellectual dead weight of neoclassical orthodoxy.

168 The advantage of the post-Keynesian approach is that it enables one to confront the problems directly and openly rather than to conceal them under simplifying assumptions. To elaborate on this point, it is necessary to delve more fully into the two areas -- theory and policy -- in which

economics is presently stymied as a result of the neoclassical orthodoxy. Once the probable impact of a PK perspective in each of these two areas has been described, together with the probable limitations on what can be achieved, the ground will have been laid for pointing out the intractability of the problems in yet a third area. That is the area of politics itself.

Necessarily the views expressed here are personal...

169 At the most obvious level... the emphasis is likely to shift from the analysis of substitution effects to the analysis of income effects. The Walrasian model which forms the core of neoclassical theory encompasses little more than substitution effects. Within the logic of this model, the demand for one good can increase only at the expense of the demand for another good, and then only because the price of the other has fallen. Similarly, one type of input, such as capital goods, can be used more intensively in the production process only at the price of another type of input, such as labor, and then again only because the relative price of the former has fallen. This approach usually eliminates by assumption the possibility that the demand for all types of goods and use of all types of inputs may increase together -- at differing rates to be sure -- as a result of the higher income and level od demand which economic growth brings with it. Reliance on the neoclassical model makes it difficult, therefore to provide a plausible and coherent explanation of economic growth.

.. it is not enough simply to take into account the income effects, making them an integral part of the analysis. It is also necessary to recognize that the income effects generally swamp the substitution effects -- if they do not eliminate them altogether.

170 Keynes was the first... who called attention to the fact that a decline in wages, rather than encouraging the substitution of labor for capital equipment, would instead depress business confidence and business investment, thereby increasing the number of unemployed workers. But others following in his path have come to the same type of conclusion -- namely, that whether the issue be long-period

growth, short-period fluctuations, the distribution of income, the pattern of trade, or one of the other topics covered in this volume , it is the level and composition of investment, together with the income effects which derive from that investment, which are the principal operative factors, not any change in relative prices. Econometric studies have led to the same type of conclusion, and it seems that only the dead weight of the neoclassical orthodoxy has prevented the economists who work inductively from generalizing this result into an empirical principle.

When the income effects are fully allowed for, however, as they must be in a PK approach, there need not be any new equilibrium position. Rather, the change in investment, or whatever else has produced the income effects, is likely to initiate a process... without a determinable end state. In other words, the analysis shifts from logical time to historical time in which the future cannot be predicted
171 because of the // 171 // complex nature of the interactionamong the different social subsystems that comprise the larger system.

Over the last several decades however quite a different philosophical framework has emerged... This is the systems, or cybernetic, approach. The advantage which it offers social scientists is that it can incorporate within its analytical structure (a) purposeful activity, (b) cumualative process, and (c) the interaction of subsystems, both as part of a larger systems dynamic and in response to feedback from the environment. The systems approach is the most general approach available to social scientists, including economists.

Under the systems approach, economics is no longer the study of how scarce resources are allocated. It is instead the study of how an economic system, defined as the set of social institutions responsible for meeting the needs of society's members, is able to expand its output over time by producing and distribting a social surplus.

172 ... Although the // 172 // final end state cannot be deduced -- because the analysis is concerned with historical time -- the process of expansion, that is, the dynamics of the system can be intelligently analyzed.

When the economic system is seen as just one of several major societal systems, each with its own particular dynamics, the way is opened to a truly interdisciplinary attack on social problems. But even when the economy is viewed in isolation, the principles of systems theory still hold. This means that the interaction between the different component parts, for example, between business firms and households or between financial and nonfinancial sectors, must be analyzed in terms of input, output, and feedback. The last is especially important if the behavior of the system as a whole is to be understood.

From a PK perspective, it is the behavior of the system as a whole, constituted as a set of historically specific institutions, which economic theory must be capable of explaining. This is the first step toward a better informed public policy. Once the system can be modeled to simulate the types of dynamic behavior actually observed in the real world -- and this means cycles as well as long-run expansion, inflation as well as rising standards of living -- the basis will be laid for effective government intervention, whether takes the form of manipulating the system as it presently exists or restructuring some essential component.

The importance of empirical testing

The discipline of economics has so far successfully resisted all efforts to alter its character as an exercise in how to reason deductively from axiomatic principles. That is, it has insisted on remaining the Euclidian geometry of
173 the social sciences... // 173 // What is missing is the same standard for judging the validity of a theory as prevails among natural scientists. This is the criterion that a theory must not just avoid logical error but that it must also account for the full range of empirically observable phenomena -- which, in the social context, consist of the real world's historical events.

Incomes policy

Incomes policy

175 An incomes policy is not just a device for limiting the wage gains of organized workers. Rather, it represents a means of determining the annual, noninflationary rise in all the different types of income that accrue to households -- dividends and rents as well as wages and salaries. And it reflects the PK view of inflation as being the process by which prices rise to deflate nominal incomes, thereby bringing real incomes into line with the availability of real resources.

In a democratic society an incomes policy of the sort just described cannot simply be imposed. It must instead gain acceptance among the different economic interest groups as the fairest and most equitable basis for distributing the fruits of technological progress which emerge
176 in the form of higher output per worker.

Thus an income policy needs to be preceded at the political level by some minimal societal agreement as to how the gains from economic growth are to be distributed. The fact that the market alone is incapable of rendering this judgment is what makes an incomes policy essential.

Once the rate and composition of investment have been determined, the economy's dynamic growth path have been largely set. For the long-run rate of expansion, and with it the growth of output per worker, depends on the rate at which supply capacity -- both business plant and equipment and social infrastructure -- is being increased. And the short-period fluctuations around that trend line depend on how steadily the growth of investment and other forms of discretionary spending are being maintained. Moreover, it is a matter of quality as well as of quantity. Just as any type of spending will not do -- only the projects that the highest marginal gains in supply capacity relative to the outlay, so that the secular rate of expansion is maxi-
177 mized. What must be recognized // 177 // is that, contrary to the conventional neoclassical argument, the market cannot be fully relied upon to assure the best results in this regard.

Pricing

Distribution and investing are, however, only two of the three legs to the post-Keynesian triangle. The third involves the pricing mechanism. Orthodox theorists have led public policy badly astray by insisting that the only relevant issue is whether resources are being optimally allocated. But the pricing mechanism also plays a central role in providing investment funds for business and in determining relative income shares. The interrelationship between these three is made more complex by the fact that in an advanced economy like that of the United States, there are two quite different types of markets, whose pricing and investment behavior vary from each
/ive other. There are the competit/ markets, largely involving primary products, which are the focal point of orthodox theory, and the oligopolistic markets -- dominated by large corporations and found primarily in the technologically more progressive sectors of theeconomy -- about which the orthodox theory is mostly silent. In the former, prices are governed by supply // 178 // and demand factors and investment is unplanned. In the latter prices are cost-determined and planning, based on the long-term capital expansion programs of the individual corporate giants, is the rule. Thus, there is no model, or set of policies based on a model, that applies across the board to both the competitive and the oligopolistic markets. Indeed, in the competitive sector, the gov't must make up for the lack of inter-firm coordination and planning, while in the oligopolistic sector, it must make sure that the private power to plan does not subvert any larger interest.

Determing the rate and composition of investment is the first order of business. Only after those questions have been settled, thereby fixing the economy's dynamic growth path, can precise figures to any pricing and in-
179 comes policy. Indeed, if the policies are based // 179 // on a correct understanding of the role played by prices and relative income shares in the growth process, the derivation of the numbers should become a routine almost

technical matter. For if the post-Keynesian arguments are correct, it will be found that there is only one average profit margin and only one rate of growth of household income which, for the secular growth rate that has been chosen, will be noninflationary.

Public and private investment

[Existence of various planning and coordinating bodies].

180 What is missing is some organ of government capable of fusing the results of these diverse efforts into a comprehensive plan, one that, because of its greater scope and coherence, would take precedence over other plans in guiding economic policy.

It requires... a new body -- a planning secretariat functioning as the technical arm of a social and economic council on which would be represented, along with key public officials, all the private interest groups whose support is essential to the success of an incomes policy.

A new social contract

181 In this way -- but only in this way -- the basis would be laid for a "social contract" that would finally permit gov't to pursue a maximum growth or "full employment" policy without having to fear the inflationary consequences. In return for not exercising the market power which enables them to obtain higher than called-for increases in nominal income -- the nation's largest corporations and trade unions among them -- would be given a more direct voice in determining the growth of real income. This would be the result of the influence which those interest groups were able to exert, through the social and economic council and its planning secretariat, on the rate and composition of public spending.

The politics of inflation

182 ... ignores perhaps the most fundamental point of the post-Keynsian explanation for inflation, And this is that inflation occurs because of conflicts over the relative distribution of income which are otherwise irreconcilable.

A social and economic council is merely a device for bringing those conflicts out into the open, providing a forum where, it is to be hoped, the genius of politicians can provide a temporary resolution so that the business of the day can proceed. The result of the planning secretariat's analytical work should be to show that, for many of the issues posed, the nature of economic processes offers no real choice. Still, not all potential conflicts can be solved solely on the basis of objective analysis. The rate of growth of output per worker governs only the average growth of real household income, not the relative distribution among households. The secular rate of expansion governs only the average mark-up above costs, not the relative size of the mark-up among different industries. On a number of such finer details considerable room for disputation will remain...

184 ... there should at least be agreement that the achievement of an effective anti-inflationary policy -- like the resolution of a number of other significant economic problems -- is not just a matter of economic theory or even of policy. It is also a question of how mature the political institutions are. Have they finally developed to the point where they are able to handle the types of distributional issues which, up to now, would surely have damaged, if not entirely destroyed them? With regard to this last question -- the political one -- it is hard to be an optimist, at least for the near future.