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What Are the Questions?

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I. Introduction

THE 1930's have been described as the years of high theory, but all the great mass of work that has been done since and the proliferation of academic economic teaching has been very little illuminated by the ideas that emerged at that time, and there are no consistent and accepted answers to the questions that were then raised.

One reason for this lack of progress is connected with the origin of the new ideas themselves. George Shackle [35, 1967] treated "high theory" as a purely intellectual movement, but in fact it arose out of the actual situation of the 'thirties—the breakdown of the world market economy in the great slump. Kalecki, Keynes, and Myrdal were trying to find an explanation for unemployment; the exploration of imperfect and monopolistic competition set afoot by the challenge, from opposite directions, of Piero Sraffa [37, 1926] and Alyn Young [40, 1928] to the orthodox theory of value, though it proved to be a blind alley, arose from the observation that, in a general buyer's market, it could not be true that prices are equal to marginal costs. The movement of the 'thirties was an attempt to bring analysis to bear on actual problems. Discussion of an actual problem cannot avoid the question of what should be done about it; questions of policy involve politics (*laissez-faire* is just as much a policy as any other). Politics involve ideology; there is no such thing as a "purely economic" problem that can be settled by purely economic logic; political

interests and political prejudice are involved in every discussion of actual questions. The participants in every controversy divide into schools—conservative or radical—and ideology is apt to seep into logic. In economics, arguments are largely devoted, as in theology, to supporting doctrines rather than testing hypotheses.

Here, the radicals have the easier case to make. They have only to point to the discrepancy between the operation of a modern economy and the ideals by which it is supposed to be judged, while the conservatives have the well-nigh impossible task of demonstrating that this is the best of all *possible* worlds. For the same reason, however, the conservatives are compensated by occupying positions of power, which they can use to keep criticism in check.

Benjamin Ward observes:

The power inherent in this system of quality control within the economics profession is obviously very great. The discipline's censors occupy leading posts in economics departments at the major institutions. . . . The lion's share of appointment and dismissal power has been vested in the departments themselves at these institutions. Any economist with serious hopes of obtaining a tenured position in one of these departments will soon be made aware of the criteria by which he is to be judged . . . the entire academic program, beginning usually at the undergraduate level but certainly at the graduate, consists of indoctrination in the ideas and techniques of the science. . . .

These inside instruments of control are accompanied by outside instruments exercised by members of the larger society. Probably the most important of these is control of funds for research and, to a lesser extent, teaching. . . . [38, 1972, pp. 29–30.]

Consciences are not much troubled by such practices because economics has mixed its ideology into the subject so well that the ideologically unconventional usually appear to appointment committees to be scientifically incompetent. [38, p. 250.]

For this reason, the conservatives do not feel obliged to answer radical criticisms on their merits and the argument is never fairly joined.

Moreover, with the best will in the world, it is excessively difficult to find an agreed answer to any question concerned with reality. Economists cannot make use of controlled experiments to settle their differences; they have to appeal to historical evidence, and evidence can always be read both ways.

The laboratory sciences proceed by isolating a question and testing hypotheses about possible answers to it, one by one. In economics, questions cannot be isolated because every aspect of human society interacts with every other; hypotheses can be put forward only in the form of a “model” of the whole economy. Before a model can be confronted with empirical tests, it has to be examined for internal consistency and for the *a priori* plausibility of its assumptions. There is a whole branch of the subject—that which carries the highest prestige—which is concerned simply with criticizing and defending hypotheses. The “high theory” of the ’thirties consisted of advancing alternative hypotheses to replace those, derived from the theory of supply and demand for labor, which had been too much discredited in the slump.

Even when it is possible to mark off some element in such a way that it can be confronted with evidence, the collection of evidence from available statistics is enormously laborious. To establish the simplest of statistical “facts” requires years of patient toil. Since it is so laborious, there is a powerful temptation to take short cuts, to overlook awkward details

and favor evidence that supports an attractive theory. No doubt natural scientists also are subject to such temptations, but the experimental method provides a sieve to keep out error which has a much finer mesh than any that can be produced by an appeal to history.

There is a still more baffling difficulty in applying an economic model to statistical evidence. It may be possible to find evidence of the relationships within the model over a certain period of time and then to predict what they will be, say over the following years; but when it is found that the relationships turned out to be different, there is no way of telling whether it is because there was a mistake in specifying the model in the first place or whether circumstances have changed meanwhile. And when they turn out the same, it is possibly by accident.¹

Difficult as it is to collect good physical data, it is far more difficult to collect long runs of economic or social data so that the whole of the run shall have a uniform significance. The data of the production of steel, for instance, change their significance not only with every invention that changes the technique of the steelmaker but with every social and economic change affecting business and industry at large, and in particular, with every technique changing the demand for steel or the supply and nature of the competing materials. For example, even the first skyscraper made of aluminum instead of steel will turn out to affect the whole future demand for structural steel, as the first diesel ship did the unquestioned dominance of the steamship.

Thus the economic game is a game where the rules are subject to important revisions, say, every ten years, and bears an uncomfortable resemblance to the Queen’s croquet game in *Alice in Wonderland*. . . . Under the circumstances, it is hopeless to give too precise a measurement to the quantities occurring in it. To

¹ For instance, it has been found that a “Cobb-Douglas production function” will fit any time-series of outputs, whatever the technology, provided that the share of wages in value added was fairly constant over the period.

assign what purports to be precise values to such essentially vague quantities is neither useful nor honest, and any pretense of applying precise formulae to these loosely defined quantities is a sham and a waste of time. [39, Norbert Wiener, 1964, pp. 90–91.]

Evading these difficulties, a great part of current teaching is conducted in terms of models that are evidently not intended to be taken seriously as hypotheses about reality, but are used rather to inculcate an orthodox ideology. For a model to be taken seriously, the assumptions must be carefully specified, while a doctrine can appeal to a general body of received ideas. This distinction is illustrated below in terms of the contention that market prices provide an efficient mechanism for allocating scarce means between alternative uses, expressed in the proposition that “a competitive equilibrium is a Pareto optimum.”

II. *Market Equilibrium*

In current teaching, a sharp distinction is usually made between micro- and macroeconomic problems, each being treated in terms of quite different concepts. It is necessary, of course, as the subject grows more complex, to focus upon particular questions one at a time, but a *general* theory cannot be split into these two parts. Micro questions—concerning the relative prices of commodities and the behavior of individuals, firms, and households—cannot be discussed in the air without any reference to the structure of the economy in which they exist, and to the processes of cyclical and secular change. Equally, macro theories of accumulation and effective demand are generalizations about micro behavior: the relation of income to expenditure for consumption, of investment to the pursuit of profit, of the management of placements, in which financial wealth is held, to rates of interest, and of wages to the level of prices results from the reactions of in-

dividuals and social groups to the situations in which they find themselves. Even the artificial conception of a stationary state has to be specified in terms of the behavior of its inhabitants. Supposing all natural and technical conditions are constant, we still have to describe the individual and social behavior which is conceived to make total consumption exactly equal to net output, neither more nor less, so that net saving and net investment are exactly zero. If there is no micro theory, there cannot be any macro theory either.

The analysis of markets is treated under the heading of micro theory, but it cannot be understood without some indication of the macro setting in which it operates. A prisoner-of-war camp, a village fair, and the shopping center of a modern city cannot all be treated in exactly the same terms.

The macro setting of the analysis of “scarce means with alternative uses” is very vaguely sketched. It appears to rely upon Say’s Law, for the scarce means are always fully utilized.² The central concept is the production-possibility surface showing the combinations of quantities of a list of specified commodities that could be produced by various combinations of the given resources.

Nothing much is usually said about the inhabitants of the model. The ancestry of Adam Smith is often claimed for it, but his world was inhabited by workers, employers, and gentlemen. Here there are only “transactors” or “economic subjects.” To borrow Michio Morishima’s trope, the people in this model are like the conventionally invisible property men of the Kabuki theatre, and only the commodities have speaking parts.

The “scarce means” consist of “labor,” that is workers who can be employed in

² Strictly speaking, the rule is that any resource that is underutilized has a zero price. When this applies to labor, presumably the workers must have died long ago.

various occupations, privately-owned land providing various kinds of natural resources, and the produced means of production (buildings and industrial equipment) that have already been accumulated. Thus, it purports to deal with a capitalist economy that has a future and a past, but the analysis applies rather to a once-over meeting of independent peasants at a rural market or to the prisoner-of-war camp where parcels were occasionally received from the Red Cross.

As Nikolay Bukharin [3] observed when he was in exile in the West, there is almost no discussion of how scarce means are organized to yield outputs; the whole emphasis is on exchanges of ready-made goods.

Robert Clower subsumes production under exchange:

An ongoing exchange economy with specialist traders *is* a production economy since there is no bar to any merchant capitalist acquiring labor services and other resources as a “buyer” and transforming them (repackaging, processing into new forms, etc.) into outputs that are unlike the original inputs and are “sold” accordingly as are commodities that undergo no such transformation. In short, a production unit *is* a particular type of middleman or trading specialist. [4, 1976.]

And he supports the view “that ‘capitalists’ are just individuals who have the wit and forethought to exploit profit opportunities by accumulating trade capital and engaging in the ‘production’ of both trading services and new types of commodities.”

It is true, of course, that industrial capitalism developed out of commercial capitalism, but the process of exchange does not explain why there are so many (presumably dull-witted) individuals who are available to sell labor services.

There are various brands of micro theory; Clower has been critical of others, but all share the characteristic of stressing exchange and neglecting production.

Even the process of marketing com-

modities is not much discussed. Since the tastes of individuals are hard and fast, there is no scope for advertisement and salesmanship to affect them. Indeed there is no scope for competition at all. To quote Oskar Morgenstern:

Competition means struggle, fight, maneuvering, bluff, hiding of information—and precisely *that* word is used to describe a situation in which no one has any influence on anything, where there is *ni gain, ni perte*, where everyone faces *fixed conditions, given prices*, and has only to adapt himself to them so as to attain an individual maximum. . . . [26, 1972, p. 1171.]

There is a large number of sellers of each kind of commodity, and though they are all assumed to be “maximizing profits,” none of them ever form a group which could increase proceeds for each member above what they could get individually.³ On the demand side, the market is made up of transactors each with a certain amount of purchasing power, in terms of some numeraire, which he spends on a selection from among the commodities offered, according to his tastes and their prices. Here the argument does correspond to Adam Smith’s treatment of the subject, for when he speaks of appealing to the self interest of the butcher, the brewer, and the baker to get us our dinner, he is evidently thinking of a gentleman with independent means spending money on the tradesmen, rather than of their competitive struggle to make a living.

At an equilibrium position on the production-possibility surface, the prices and flows of sales of the various commodities determine the earnings of various types of resources so that the income of each transactor depends upon the specific resources that he commands. An observing economist may make use of a single numeraire but, for each inhabitant of the

³ It has been found by mathematical analysis that to ensure that combinations do not pay, the number of sellers must be indefinitely great.

model, the numeraire is a unit of whatever he has to sell.

The situation is described as an optimum when it is impossible to improve the position of one individual without doing harm to any other, but in Pareto's formulation individuals are not depicted in human terms. No aspect of economic life is considered but the individual's choice of how to spend given purchasing power, at a given moment, among a given assortment of goods. Pareto's optimum only repeats the definition of the production-possibility surface on which the output of one commodity cannot be increased without reducing the output of any other. (Only the commodities have speaking parts.)

The principle of measuring the cost of any benefit in terms of the alternative opportunities that must be foregone in order to get it can be applied in a general way to any decision-making unit, such as a family with limited income, a farm with limited space, a business with limited finance, or a planning commission with the limited investable resources of a particular socialist nation. But the choices that any such unit makes must depend upon the information at its disposal, both about technical conditions and market possibilities. In a perfectly static society, relevant knowledge might be handed down to everyone by tradition, but their behavior also would be governed by tradition and no one would be conscious of ever making choices at all. In the world where we are living, choices have to be made in the light of more or less inadequate information. The full information required to make a correct choice can never be available because of the inescapable fact that:

the basic data simply do not exist, and cannot exist, no matter what information is devised. There is no certain knowledge about the future, not even certain knowledge of probability distributions. There are expectations (or guesses) formulated with greater or less care; and unfortunately those formulated with the

greatest care are by no means always the most accurate. The New York State legislature has deliberated on these difficulties, and enacted in Section 899 of the Code of Criminal Procedure that persons "Pretending to forecast the future" shall be considered disorderly under subdivision 3, Section 901 of the Code and liable to a fine of \$250 and/or six months in prison. [21, B. J. Loasby, 1977.]

John Hicks, having repudiated the works of his former incarnation, J. R. Hicks [11, 1975], has observed that the very concept of equilibrium arose from a misleading analogy with movements in space, which cannot be applied to movements in time [12, 1976]. In space, it is possible to go to and fro, but time goes only one way; there is no going back to correct a mistake; an equilibrium cannot be reached by a process of trial and error. Since all individual choices are based upon more or less independent and inaccurate judgments about what outcomes will be, it is impossible that they should be consistent with each other. The assumption of "perfect foresight" carries the argument out of this world into a system of mathematical abstraction, which, although the symbols may be given economic names, has no point of contact with empirical reality.

The question of scarce means with alternative uses becomes self contradictory when it is set in historical time, where today is an ever-moving break between the irrevocable past and the unknown future. At any moment, certainly, resources are scarce, but they have hardly any range of alternative uses. The workers available to be employed are not a supply of "labor," but a number of carpenters or coal miners. The uses of land depend largely on transport; industrial equipment was created to assist the output of particular products. To change the use of resources requires investment and training, which alters the resources themselves. As for choice among investment projects, this involves the whole analysis of the nature of capitalism and of its evolution through time.

Something like a production-possibility surface might appear in the calculations made for investment plans in a fully socialist economy, but in the world of private enterprise it cannot exist.

A completely different approach to the analysis of markets was proposed in *The Theory of Games and Economic Behaviour* [28, 1944]. This provides a powerful criticism of orthodox doctrine, but it is itself open to the objection that the type of games susceptible to mathematical analysis, such as noughts and crosses or go, are subject to set rules that all players accept and to the condition that each play has an agreed time limit. The scope of economic life, even that part of it which is concerned with markets, cannot be so narrowly confined.

The most basic objection to orthodox doctrine is raised by Kenneth Arrow, for he rejects the principle of individualism. The conduct of economic life requires the authority of institutions, such as corporations or national governments:

There are many other organizations beside the government and the firm. But all of them, whether political party or revolutionary movement, university or church, share the common characteristics of the need for collective action and the allocation of resources through non-market methods.

There is still another set of institutions, if that is the right word, I want to call to your attention and make much of. These are invisible institutions: the principles of ethics and morality. . . . [1, 1974, p. 26.]

The familiar story of the prisoners dilemma illustrates this point. If each man acts selfishly, both will be worse off than if they follow the moral rule of refusing to betray a chum. But this rule cannot be introduced *ad hoc*. If it is followed at all it must be followed for its own sake, equally in circumstances where the individual will suffer for it.

With this objection, the whole structure of the model collapses.

III. *Theory of the Firm*

Keynes described the orthodox equilibrium theory as a pretty, polite technique “which tries to deal with the present by abstracting from the fact that we know very little about the future” [18, 1937]. Alan Coddington observes:

To stress the basis of all economic activity in more or less uncertain expectations is precisely to emphasize the openness and incompleteness of economic theorizing and explanation. [5, 1976, p. 1263.]

Certainly it is true that a mechanical model cannot survive when it is set afloat in historical time. (It was recognizing the difference between the future and the past that caused Hicks to become disillusioned with the *IS/LM* model with which generations of students have been taught to misinterpret the *General Theory*.) But this does not mean that economic theory is useless. We cannot help trying to understand the world we are living in, and we need to construct some kind of picture of an economy from which to draw hypotheses about its mode of operation. We cannot hope ever to get neat and precise answers to the questions that hypotheses raise, but we can discriminate among the pictures of reality that are offered and choose the least implausible ones to elaborate and to confront with whatever evidence we can find. This is one function of economic models. The other is to satisfy the requirements of ideology.

Hypotheses are invented and die every day. The criteria by which some are chosen to survive and enter into the corpus of economic teaching are of two kinds. One is that a hypothesis seems life-like and offers some explanation that appears sufficiently promising to be worth exploring, and the other is that it fits into and supports received doctrine.

Clearly the model of competitive equilibrium has a low score on the first criterion and owes its support to the second.

There is another approach to the analysis of competition in which the relations between observation and doctrine are more subtle, that is, the problem known as Marshall's dilemma.

Marshall's model was concerned not only with exchange but also stressed manufacture. The most basic micro-macro question for an industrial economy concerns the way production is organized in firms. Marshall had a picture, based on observation, of the family business in British manufacturing industry. He found it plausible to argue that as a firm's business expands, its costs of production fall because of "internal and external economies of scale." He observed, moreover, that in many cases the fortunes of a business are bound up with the life of a family. An individual sets it going and it prospers, but by the third generation its vigor is lost.

Now, on the plane of doctrine, Marshall held that in competitive conditions, prices are determined by costs, so that the benefit of economies of scale are passed on to the public. But how can competition be maintained if any firm that gets a start undersells its competitors, gains more economies, and therefore cuts prices further until it establishes a monopoly for itself?

To get out of the difficulty, Marshall fell back on the observation, which was quite correct in many instances, that family firms lose competitive power as they grow. He made this into a general rule (allowing for monopoly as an occasional exception) and described industry as a forest in which each individual tree grows only to a certain height.

This raised the obvious difficulty that when the grandsons of its founder lose their grip on a business, it can go public and become immortal as a joint-stock company. Marshall recognized this possibility, but he did not allow it to spoil his doctrine. The joint-stock company loses "its elasticity and progressive force," so that it is unlikely to be able to continue to grow in

competition "with younger and smaller rivals" [22, 1916, p. 316].

A. C. Pigou [30, 1934, appendix III] was a loyal disciple of Marshall and quite innocent of any knowledge of industry. He therefore constructed a U-shaped average cost curve for a firm, showing economies of scale up to a certain size and rising costs beyond it. Pigou's firm, in a perfectly competitive market, is always selling the output that maximizes profits, that is, at which a small increase in production would cause marginal cost to exceed the price; when price exceeds average cost, the firm is making a super-normal profit, which will attract in new competition; when price is below average costs, some firms are dropping out. Equilibrium requires that both marginal and average costs are equal to price, that is, that the size of the firm is such that it is producing at minimum cost. In the ultimate equilibrium of a stationary state, the flow of profits obtained by each firm, is just sufficient to cover interest at the ruling rate on the value of the capital that it operates, leaving nothing over as the "reward of enterprise."

In Marshall's world, however, profits accrue to "business ability in command of capital"; successful firms retain part of their profits to invest in expanding their activities, and the more capital they own the easier it is to borrow outside finance. The conception is absurd that a firm when it is making more than normal profits sits around waiting for competition to invade its market and drive it back towards its optimum size. It would be the height of imprudence for a business to distribute the whole of its net profit to the family or to shareholders, and no business could borrow if prospective profits did not exceed its interest bill.

If Marshall's theory had been taken on its merits as a hypothesis, it would have soon appeared that the way out of his dilemma was the opposite of that

proposed by Pigou. Successful firms accumulate finance and devour the unsuccessful ones. Most joint-stock companies continue to grow, and many competitive industries tend towards a condition of dominance by one or a few firms. But the great corporations do not behave monopolistically in the sense of restricting output in order to raise prices. They continue to compete with each other, invading new markets, introducing new products, and evolving new techniques, while at the same time throwing up opportunities for new small businesses to make a start.

Marshall's analysis was half in historical time and half in equilibrium doctrine. It is the first half that can pass the test of *a priori* plausibility and provide a starting point for a "theory of the firm" appropriate to an economy of private enterprise.

Keynes developed his analysis in the setting of a short-period situation with given productive capacity and training of labor. This was appropriate to his problem: the influence of the level of effective demand on the utilization of resources already in existence. He had to concentrate upon forcing his readers to admit that there was such a problem. He was concerned with investment primarily as the source of instability and, apart from some quite conventional remarks, he did not have much to say about the process of accumulation either for firms or for nations.

Hicks [12, 1976, p. 140] complains that Keynes's argument is not set wholly in historical time because the multiplier theory (and the theory of production that goes with it) is couched in terms of equilibrium. This is quite untrue. The original purpose of the multiplier was to work out what increase in income could be expected over the immediate future if the level of home investment were to be stepped up, beginning from a particular date. Admittedly the time-scheme was not very clearly worked out (Dennis Robertson complained a lot about this), but the main

topic of the *General Theory* was the consequences of a *change* in the level of effective demand within a short-period situation with given plant and available labor.⁴ The consequences of changing the stock of plant as investment matures hardly came into the story.

It is paradoxical that during the great Age of Growth—the twenty-five years that followed the Second World War—so-called macro theory was taught in "Keynesian" terms, though Keynes himself had almost nothing to say about growth. Once he had thrown off the incubus of Say's Law, the whole field of the long-period theory of accumulation remained to be explored.

Side by side with the timeless equilibrium model, there have grown up a number of treatments of the behavior of firms in a growing industrial economy, but no plausible simple general hypothesis has so far been found.⁵

The doctrine that firms "maximize profits" collapses as soon as it is taken out of the equilibrium world and set in historical time. For a firm which is growing from year to year by investing retained profits, the maximum flow of profits will be reached when it commands an indefinitely large value of capital. Certainly, it is true that firms pursue profit, for without profits they would perish, but to "maximize" profits over the long run is a meaningless phrase.

A less vapid statement would be that, in respect to each particular choice, say, of an investment program, the firm will prefer the most profitable alternative. But, as Loasby has observed ([21, 1977] quoted above), the firm does not know which would in fact be the most profitable alter-

⁴ It must be admitted that there are many Marshallian remnants in the *General Theory*, which obscure exposition, but in the reply to Jacob Viner the point is made clearly [18, Keynes, 1937].

⁵ The question was opened by Edith Penrose [29] in 1959. A recent contribution is *The Megacorp and Oligopoly* by Alfred S. Eichner [6, 1976].

native. The observing economist can only advance the hypothesis that the alternative actually chosen was that which was expected to be the most profitable.

Furthermore, any plan a firm makes is multidimensional—it involves the selection of products; the choice of technique, including the choice of workers to employ; it involves pricing policy and salesmanship; and it involves the availability of finance. In a small business, all these considerations revolve in the mind of the boss, who acts on business instinct and does not explain, even to himself, exactly what his motives are. In a large corporation, any decision involves the personnel of many departments in the technostucture—salesmen, accountants, engineers—each of which has its characteristic beliefs and interests, and which have to be coordinated by bureaucratic rules.

The stress that John Kenneth Galbraith [9, 1967] lays on the dependence of large corporations on their technostuctures has been taken to suggest that they are not governed by the profit motive. This is a misunderstanding. The specialists who serve a particular corporation depend upon it for their incomes and careers and generally develop a kind of patriotism for it. They have just as much motive to promote its profitability as an old-fashioned capitalist. But the complexity of multidimensional choice in conditions of uncertainty means that maximizing profits, even in the limited sense of preferring more to less profitable policies, is by no means a simple matter.

An alternative hypothesis is that the motive of firms is to maximize their rate of growth. But this does not take us much further than the observation that firms that are not profitable do not survive, and those that are, grow.

Another approach is to start from the growth of the market for a range of products and suggest that each of a group of competing firms keeps its productive ca-

capacity growing so as to maintain its share. But fast-growing firms expand into diversified markets.

One view is that the growth of the productive capacity of an industrial firm is a function of its flow of profits—as fast as its cash flow comes in, it looks around for opportunities to invest. Another view is that when an investment opportunity offers, the firm adjusts the prices of its existing output in such a way as to get the profit that it needs to finance the investment.

All these hypotheses have turned up many interesting and plausible concepts, but it seems to me that the search for a single generalization is a hangover from the equilibrium model. There is no simple theory to cover the multifarious evolution of a private enterprise economy. The methods of ethology are more appropriate than mathematics to the study of industry, and indeed we do know a great deal about the natural history of business life from studies of the economics of industry, of finance, and of conditions of labor. But this knowledge cannot be well organized if it has to be squeezed into formulae that smooth over the distinction between the future and the past.

Galbraith sets out to substitute for Marshall a picture, based on general observation, of the New Industrial State. His account of the behavior of giant firms appears plausible or, at the very least, worth discussing, but it has had no success as an ideological doctrine. As he points out, a very large proportion of the educated and professional class in industrial nations is employed directly or indirectly by great corporations, and the educational system is largely at their service. For this reason, the power that Ward refers to [38, 1972] prevents critical views from penetrating into orthodoxy.

IV. *Prices*

Keynes complained of the theory in which he was brought up:

So long as economists are concerned with what is called the theory of value, they have been accustomed to teach that prices are governed by the conditions of supply and demand; and, in particular, changes in marginal cost and the elasticity of short-period supply have played a prominent part. But when they pass in volume II, or more often in a separate treatise, to the theory of money and prices, we hear no more of these homely but intelligible concepts and move into a world where prices are governed by the quantity of money, by its income-velocity, by the velocity of circulation relatively to the volume of transactions, by hoarding, by forced saving, by inflation and deflation *et hoc genus omne*; and little or no attempt is made to relate these vaguer phrases to our former notions of the elasticities of supply and demand [20, 1936, p. 292].

He proposed a micro-macro theory in which the prices of commodities are primarily governed by the cost of production, and he observed that the main element in the general level of costs (internal to one country) which can change in the short period, is the level of money wage rates. He was concerned to argue that cutting wage rates would lower prices. We now have to adapt the argument to the case where raising money-wage rates (relatively to the growth of productivity) causes prices to rise. Keynes's "homely but intelligible" concepts now appear old-fashioned. A great deal of work remains to be done to establish a macro-micro analysis of prices appropriate to the modern world. Moreover, during the Age of Growth the industrial economies have gone through a mutation so that unemployment no longer prevents wage rates from rising.

Meanwhile the "vague phrases" that Keynes complained of have come back into fashion. "Monetarism" is now a powerful doctrine, but it is not easy to confront it with the post-Keynesian system, to discuss which is the more plausible, for the hypotheses on which the quantity theory is based have never been clearly stated.

The post-Keynesian system dwells in

historical time; it is designed to analyze the consequences that may be expected to follow a change taking place at a particular date in particular circumstances. The system is set up like an artist's mobile. A flick on any point sets everything in motion, but it is possible to see which are the principle interactions and which way causation runs from one to another.

The old-fashioned formula, $MV = PT$, can be interpreted in terms of this mobile. Suppose that, since this time last year, there has been an all-round rise in money-wage rates and also some increase in employment. Both the flow of transactions (T) and the level of prices (P) are now higher. This has led to an increase in bank deposits, with a corresponding increase in currency in circulation because the value of working capital having gone up, many businesses have taken larger advances from banks or drawn upon overdraft facilities. At the same time, average velocity of circulation may have risen, as liquid reserves have been drawn upon so that a larger proportion of the total stock of money is now in accounts that are more frequently turned over. (It is in general more true to say that an increase in prices causes the quantity of money to increase than the other way round.)

However, if a spontaneous rise in M and V was not sufficient to provide for the higher PT , then interest rates must have risen, and a smaller proportion of the stock of money is now held by bearish owners who prefer cash to securities (in existing circumstances) as a placement for their wealth.

When the monetary authorities are endeavoring to prevent M from increasing, interest rates are raised all the more, and a credit squeeze checks the growth of activity or even precipitates a slump. But this, unfortunately, is not guaranteed to reduce prices.

The monetarist theory is not so easily described. The modern version of the

quantity theory connects M , not to the flow of transactions, but to PQ , the value of gross output, so that V simply means GNP divided by some figure representing the quantity of money; all the interactions in the mobile are collapsed into one opaque relationship.

There seems to be a chronic confusion, in latter-day expositions of monetarism, between changes in the stock of money deliberately brought about by the authorities and the effects of changes in the flow of government expenditure. The story of currency notes dropped from helicopters is presumably intended to illustrate the case of a budget deficit financed by "using the printing press" [8, Milton Friedman, 1969]. A shower of notes, picked up by passers-by, might be expected to produce a burst of expenditure that would peter out over a short time; a budget deficit continued from year to year tends to support a flow of expenditure as long as it continues. An *increase* in the deficit from one month to the next tends to increase expenditure over the following months in much the same way as a commensurate rise in investment or reduction in thriftiness. This is not a *monetary* phenomenon, though it is likely to be accompanied by an increase in MV . There is no way to distinguish between a rise in activity that is "inflationary" in the monetarist sense from one that is not.

Monetary influences on the behavior of the economy, in the proper sense, arise from changes in the stock of placements (including currency) available to the public relative to the demand for them. A shower of notes would leave behind (after the increase in expenditure with its multiplier effect was exhausted) an addition to wealth equal to the savings made out of the extra income generated by the expenditure and an equal addition to the stock of currency notes. Assuming that the demand for currency has been increased less than the supply, credit will be some-

what easier in the final position that it would otherwise have been. This is the only *monetary* element in the story of the helicopters.

A budget deficit may be financed by borrowing through the banking system and so increasing the quantity of money, but it need not be. A modern government has a large national debt to operate upon, not only what it borrowed last week. If it thinks right, it can sell long-term bonds and generate a credit squeeze whatever its budgetary balance may be. The trouble is that when money-wage rates and prices are rising, increasing values of working capital have to be financed and the authorities can prevent the quantity of money from increasing only by bankrupting business and bringing production to a halt.

Keynes, looking forward to a period of continuous high employment, expected money-wage rates to rise faster than productivity. He regarded this as an essentially political problem and did not suggest any remedy (see Richard Kahn [14, 1974]). Michal Kalecki observed: "If capitalism can adjust itself to full employment a fundamental reform will have been incorporated in it" [17, 1943]. The revival of monetary theory is a *dévice* for avoiding discussion of political problems. This makes it very attractive as a doctrine, but fails to provide any plausible hypotheses for interpreting experience.

Keynes intended to bring the theory of prices back from Volume II, *Money*, to Volume I, the *Principles of Economics*, but Michal Kalecki [16, 1939] made a greater contribution than Keynes himself to carrying this program forward.

Kalecki drew attention to the fact that there are two distinct systems of price formation in the modern world, one dominated by supply and demand and one by costs plus profits. This distinction has recently been rediscovered by Hicks [12, 1976, p. 149]. The market for some com-

modities is created by specialist merchants who buy to sell again, and make their profits out of price differences. They carry stocks; when the outflow of sales exceeds the inflow of purchases so that stocks are falling, they raise prices, and conversely. A large part of the produce of agriculture and extractive industries is handled in this way. For manufactures, in modern times, the producers have taken over the merchandizing function. They offer their commodities at an advertised price and produce for sale what the market will take. There are various intermediate forms and overlapping conditions, but the main distinction is between these two types.

Kalecki analyzed industrial prices in terms of gross profit margins expressed as a mark-up on average prime cost. As his theory evolved, he rejected the view that Keynes had taken over from Marshall, that an increase in output requires a rise of prices because of rising marginal costs. On this, his opinion now generally prevails. In general, it seems that average prime costs fall rather than rise with rising utilization of plant. A seller's market, in which the flow of output is limited by capacity, is rather rare because it quickly leads to investment to expand capacity for production of the commodities concerned; if it is expected to last, it will not. Even while it prevails, firms generally prefer to lengthen delivery dates rather than to choke back demand by raising prices.

Kalecki observed that prime costs are made up of two independent elements, the wage bill and the cost of materials and power. Here there is an interconnection between the two types of price formation, for costs of materials are strongly influenced by supply and demand. Bargaining for money-wage rates depends upon the balance of forces in the labor market. Assuming a stable pattern of gross profit margins, we can deduce the behavior of prices to be expected in the short period.

A rise in the overall level of activity entails an increase in demand for materials, which raises their prices. The rise in prime costs that this entails leads to a more or less proportional rise in prices. Now real wage rates have been reduced, while profits in money terms have risen. This sets the stage for a rise in money-wage rates. On the other tack, a decline in general industrial activity tends to lower material prices, but the resistance of organized labor is generally strong enough to prevent money-wage rates from being cut (though unemployment and short-time reduce earnings).

Kalecki's analysis reinforces Keynes's view that inflation is essentially a political problem by stressing the relationship between the formation of prices and the share of wages in the proceeds of industry, although the treatment of profit margins, which Kalecki derived from "imperfect competition," was not thoroughly worked out.

Some evidence has been found to support the assumption that the ratio of gross margins to prime costs is fairly stable in respect to changes in the general level of demand (R. R. Neild [27, 1963] and Wynne A. H. Godley and William D. Nordhaus [10, 1972]). But the hypothesis that the pattern of gross margins for various commodities can be explained solely by "the degree of monopoly" was in the nature of a shot in the dark. A high degree of monopoly, in Kalecki's sense, means a weak state of price competition. It is true that the great oligopolistic corporations can set higher margins on their products than small competitive firms, but they may be using them partly to cover the expenses of nonprice competition among themselves. Moreover, the degree of monopoly is itself partly a function of the level of margins required to cover overhead costs of production. Risky investments requiring a heavy initial capital cost are made only by powerful corporations,

which have sufficient command over their markets to expect to be able to recover adequate gross profits.

Here we come to the border-line between long- and short-period theory of prices, which has been very inadequately explored.

V. Long-run Growth

Hicks, in the course of his "long struggle to escape" from *Value and Capital*, came to the conclusion that models of steady growth are futile. [12, 1976, p. 143]. Certainly, if steady growth is proposed as a hypothesis, it sinks at the first step but, as Hicks himself found, it is useful in what János Kornai describes as intellectual experiments, which are necessary to sort out the questions involved in analyzing complicated processes.

Hicks describes his attempt to analyze disequilibrium growth in *Capital and Time*:

I had to start very slowly. If I had started with a fine set of plausible assumptions, drawn from the real world, I am sure I should have got nowhere. I had to build up my model bit by bit. I began from a steady state (but that was simply because I had to have something firm, which I thought I understood, from which to start), but the point of the steady state . . . is that it is to be *disturbed*. [12, 1976, p. 145.]

I intended my golden age (which has often been mistaken for a hypothesis) to be used in this way, as I suggested in *Exercises in Economic Analysis* in 1960:

Most economic questions lead up to a discussion of what consequences may be expected to follow a certain event. We cannot isolate a particular causal element from its surrounding circumstances by a controlled experiment. . . . We have to proceed by breaking the question up into parts, and after discussing each separately, reassemble the pieces as best we may.

First, compare two economies which are alike in all relevant respects except the one which we wish to isolate. . . . Each has its own past and its own expectations about its own future. They need not be in stationary conditions pro-

vided that any change that has been taking place or is expected is smooth and regular so that we know where we are with it.

Next consider a single economy, following a regular predictable path, and consider how its subsequent course is altered by an event happening at a particular moment. . . .

Then consider an economy which is not following a smooth path, but is caught for examination, so to speak, at a particular moment in a more or less turbulent history. We have to try to work out what future development is inherent in the situation as it exists to-day. . . .

Finally, we have to try to see what effect upon this in any case turbulent path would be introduced by a particular event. [32, 1960, pp. xviii-xx.]

This is what makes serious economics difficult.

A discussion of growth immediately raises the question of technical change. This was for a long time held up by the conception of a production function in labor and "capital." The concept of "malleable machines" [24, James E. Meade, 1961] was introduced precisely to abolish the difference between the future and the past so that a growing economy could be always in equilibrium. A pseudo-production function or "book of blueprints" was a half-way house between history and a timeless production function. The pseudo-production function consists of the specification of a set of mutually non-inferior techniques, each requiring a particular stock of means of production per man employed. Each is eligible for at least one rate of profit, and none is superior to the rest at every rate of profit. When the techniques are listed in order of the flow per man employed of a homogeneous net output, it can be seen that a higher output is not necessarily associated with "more capital," that a technique that is eligible at a higher rate of profit may require a larger value of capital at the corresponding prices, and that the same technique may be eligible at widely different rates of

profit. This killed off the doctrine of “marginal productivity of capital,” associated with the production function (though it has refused to get buried [2, Martin Bronfenbrenner, 1977, p. 419]), but it does not, by itself provide the basis for an alternative analysis of accumulation. If techniques are invented, one after the other in historical time, there is no reason to expect them to be mutually non-superior. A new technique is normally adopted because, at existing prices and wage rates, it promises a higher return than the one in use per unit of financial investment. It does not have to wait for a change in prices to make it eligible. But it will not remain exceptionally profitable for long. Copiers wipe out the initial competitive advantage of new commodities and rising real wage rates, of higher productivity. Meanwhile, new, more eligible techniques are being introduced. At each moment, the prospect of higher profits is inducing change while, over a run of years, the *ex post* average realized rate of profit may be constant or falling.

To sort out the analysis of this turbulent scene involves the whole of economics and, as Hicks says, we must approach it bit by bit.

The first use to which the golden-age method was put was to examine the relation between accumulation and the rate of profit. Take Kalecki's assumptions that wages are currently consumed as they are received; gross investment is financed out of profits, which are also partly distributed to rentiers. On a steady growth path, g , the rate of growth per annum is equal to I/K , the ratio of net investment to the value of the stock of capital at the ruling rate of profit, and the rate of profit is equal to g/s_p where $(1 - s_p)$ is the proportion of profits consumed by rentiers' households. Thus, if two economies are alike in all respects except for the share of saving from profits, with equal growth rates and the same level of money wages, then prices

are higher in the economy where rentiers are less thrifty.

This kind of argument is not confined to strictly steady growth. When each firm finances its own investment out of its own cash flow, and plans to invest its own retained profits, there is no problem of effective demand; the financial system, as Hyman Minsky [25, 1975] puts it, is robust, and investment has great inertia. When firms can raise outside finance direct from rentiers or through the banks, the system is liable to instability. The rate of investment is not tethered by a particular ratio to the value of the stock of capital. Any rise in investment above the former ratio increases the current flow of profits and encourages further investment and a rise in the proportion of borrowing to own finance. Soon schemes of investment are being planned that will be viable only if the overall rate of investment continues to rise. A fragile debt structure has been built up. When the acceleration in the rate of investment tapers off, some businesses find current receipts less than current obligations, and a financial collapse occurs. During the boom, equity holders have been experiencing capital gains and increasing the ratio of expenditure to income; when the boom breaks, thriftiness increases. Thus, long-run average growth may occur in cycles.

There is no guarantee, because growth has been maintained on the average for a run of years, that it will continue. At any stage in the process of accumulation, a sufficiently drastic financial collapse may throw the investors into a state of self-fulfilling pessimism, which postpones recovery indefinitely.

The monetary characteristics of a growing economy would generate instability even if the “real forces” developed smoothly, but (apart from wars and political upheavals) technology has never developed smoothly. As Joseph Schumpeter observed, great fundamental discoveries

and inventions occur at random intervals and each is followed by a boom, or a series of booms, as investment is made in innovations embodying new techniques. When the appropriate changes have been made in the stock of industrial capital, investment tails off and recession supervenes.

This problem also can be analyzed by means of the golden-age method. We can distinguish the technical character of an innovation in terms of the cost of investment necessary to install the appropriate means of production. When the equipment involved in employing a man with the latest best-practice technique has required the same investment (at unchanged real-wage rates) as that which it replaced, the innovation has been neutral. When it has required a greater investment, the innovation has been capital-using, and when less, capital saving.

The “stylized facts”—a run of years with a constant rate of profit, constant share of wages in proceeds, and a constant ratio of the value of capital to the flow of net output—are possible only if technical progress is neutral, though neutrality by itself does not guarantee a constant rate of profit.

To allow a constant rate of profit when a series of neutral innovations are being made, the real-wage rate must rise at the same rate as average net output per man employed. Then, if a steady rate of accumulation is being maintained, the value of the stock of capital is rising at the same rate as the flow of net output and the capital to output ratio is constant.

A round of capital-using innovations, with a constant rate of profit, requires real wages to rise in a smaller proportion than net output (to allow for the rise in the capital to labor ratio). Conversely with capital-saving innovations.

On an orthodox production function, there are no articulated techniques. “Capital” is a kind of mush and, for some unexplained reason, a higher ratio of

“capital” to labor is eligible only at a lower rate of profit.

With neutral technical progress, it is possible to maintain both a constant rate of profit and a constant capital to output ratio. Neutrality is a necessary, not sufficient, condition. Steady growth requires not only that innovations are neutral, but also that the rate of accumulation is constant and that real wages rise at the appropriate rate. These are the characteristics of a golden age.

When real wages fail to rise in step with output, demand fails to expand as fast as supply (unless investment is expanding sufficiently to make up the difference). Underconsumption discourages investment, and the economy falls out of the golden-age into stagnation.

The analysis is quite complicated even on this high plane of abstraction, and this plane is very far removed from the turbulence of actual history. Here is a field where mathematical expertise combined with real-life observation has plenty of work to do. Meanwhile we may hazard some general remarks.

First consider the formation of prices. Innovating firms have to set prices *ex ante*. They may be supposed to aim at a price that will cover average total cost (including the interest bill) at some standard level of utilization of plant, plus an allowance for selling costs, plus an allowance for net profit. As well as the choice of technique, the choice of the standard of utilization, of selling costs, and of the ratio of net profit to price depend upon the policy of the individual firm. There is too great an element of luck in the game for an outside observer to tell which policies are proving the most successful in any particular circumstances.

The design of new commodities is a very important element in innovation. Here the large firms with an ample flow of finance have a great advantage. They can employ research staffs and try out a large

number of innovations in the expectation that one will take off and become a winner.

Old commodities are constantly being dolled up with changes of design in the attempt to maintain demand.

The evolution of the general level of prices depends very much upon the strength of the labor movement. With constant prices and money-wage rates, a firm that has made an innovation which raises the value of output per man by more than the cost of investment per man is enjoying a higher rate of profit for the time being. Trade unions feel that it is a right and a duty to get a share of this profit for their members. They demand higher money-wage rates and the prosperous firms may concede this without a fight and without a fully-offsetting rise in selling prices. They may actually welcome a rise in real-wage rates because it helps them in competition with smaller and more backward firms, which cannot survive a rise in costs.

In a closed economy (without foreign trade), a general rise in average wage rates proportional to the average increase in productivity would keep the overall price level constant, but this cannot occur. Wages rise fastest in the most profitable industries. Less profitable industries have to raise the wages that they pay in response, and the firms in those industries have to raise their selling prices in order to survive. Thus, a general rise in real wages is accompanied by a change in the pattern of prices. As the cost of labor in terms of commodities rises, some lines of employment (say, domestic help) are squeezed out. Others (say, collecting garbage) have to be mechanized to maintain a necessary service, for in many cases machines have become cheaper than men. Here we find a grain of truth in the orthodox conception of substitution between capital and labor.

When accumulation has been going on

vigorously while the population has ceased to grow, a condition arises of scarcity of labor in the sense that the flow of investable finance from retained profits has risen relative to the number of employable workers. This enhances the bargaining power of labor. (Marx failed to emphasize that growth of population is inimical to the interests of the proletariat.) It also stimulates inventions of all kinds. Even capital-using innovations save labor in the sense of raising output per man of the work force as a whole.

When there is a strong capital-using bias in technical progress, it requires a higher flow of gross investment to maintain a constant long-run level of employment. If sufficient gross investment is not forthcoming, a reserve army of long-period unemployment is created again.

Even when they are not capital-using, innovations may require a greatly increased minimum size of investment. This enhances the competitive advantage of large against small businesses.

A major side effect of technical change is on the nature of work. It is characteristic of modern industry to require highly trained personnel, while it has no use for the labor power of a great mass of unskilled workers.

Thus (as Ricardo admitted) technical development, which from the point of view of capitalism is progressive, may reduce the share of wages in the proceeds of industry and generate long-period unemployment. For a long time, this was hushed up in orthodox doctrine, but now it is becoming too painfully obvious to be ignored.

VI. *International Trade*

The most powerful and all pervasive doctrine in pre-Keynesian orthodoxy was the case in favor of free trade. This was not invented by the neoclassicists, but derived via Marshall from David Ricardo.

Ricardo intended his model to exist in

historical time; he claimed that *removing* protection would *increase* wealth, but in two important respects his argument runs in terms of timeless equilibrium. In the famous story which begins with England and Portugal both producing both cloth and wine [31, 1951, chap. 7], resources can be moved instantaneously, when trade begins, from one industry to another in each country. Labor-value prices rule in each country. This means that there is a uniform rate of profit and a uniform capital to labor ratio in each. Output per man of each commodity determines their relative prices within each country. When it becomes profitable to expand one industry, resources are moved out of the other without trouble or loss and without changing the capital to labor ratio in the country concerned. (It is curious that wine, as well as cloth, is produced in conditions of “constant returns.”)

Here is the first case of analysis couched in terms of a movement through time, which is really a comparison of equilibrium positions.

The second case is even more striking. Ricardo did not allow overseas investment (which he disapproved of) into his model. The value of the flow of imports and of exports had to be equal for each country. He relied upon gold flows and the quantity theory of money to establish equilibrium in the price levels of trading countries.

It is not legitimate to complain of Ricardo, who was hacking a pioneering path through unknown problems, but it is certainly permissible to reproach his successors for keeping the so-called theory of international trade on this narrow track ever since.

To broaden the discussion, the first question that we must ask is: What is a nation? In the equilibrium theory, from Marshall [23, 1879] to Paul Samuelson [34, 1948] and till today, a country is treated as a compact bundle of “factors of production,” at first in isolation, which remains

physically unchanged as trade takes place. Samuelson prudently named his two factors “land” and “labor,” but many of his followers postulate that each country is endowed with a particular “quantity of capital”; though profit rates may differ, no financial flows take place.

Among modern industrial countries there is a great interpenetration of production of specialized components of traded commodities; rentiers in each country own placements in others; banking systems are interlocked; great corporations (sometimes operating under “flags of convenience”) install facilities in many countries and employ labor and technology personnel of many nationalities. They have become independent entities, each larger and more powerful than many nations, not burdened with patriotism for anything except their own command of capital. The native-born workers of a country regard themselves as a nation, but great capitalist businesses feel it their duty to “maximize profits” by seeking cheap labor wherever they can find it.

There is one respect, however, in which a modern nation is a distinct economic entity: it has a current account of foreign payments and receipts and an exchange rate, which are of concern to its government and monetary authorities.

For monetary equilibrium, it is not necessary for the current account to be balanced. It is necessary that a surplus of foreign receipts is matched by equal net foreign lending or a deficit matched by borrowing. A surplus is correctly described as a *favorable* balance. It means that citizens of the home country are acquiring foreign assets and so improving its balance for the future. A deficit covered by borrowing may be welcomed if it is due to a high rate of investment at home, which is developing resources that will yield a surplus of exports in the future to repay the debt. But a deficit that is due merely to competitive weakness is highly

unfavorable; moreover, the interest on the loans necessary to meet it imposes a growing burden on the balance of payments, which makes it progressively more unfavorable.

Ricardo, to make his case as dramatic as possible, gave Portugal a competitive advantage over England in the initial position. The output (say, per week) of Portuguese workers both of cloth and of wine was higher than that of English workers. If money wage rates (in terms of gold) had been more or less the same when trade began, England would have been unable to export anything and would have had a drain of gold equal to the total value of her imports. Substituting a Keynes-Kalecki theory of prices for the quantity theory of money, we may say that equilibrium could not have been reached until relative money-wage rates were higher in Portugal in the same ratio as average productivity.

There is a certain tendency for wage differentials to adjust to trade balances. Where output per man is higher in one country than in others, if wages are *not* sufficiently higher there is a competitive advantage in trade leading to high exports and so to high employment and a high rate of profit. Both influences tend to cause money-wage rates to rise. Unemployment and low profits may not actually push down wage rates, but prevent them from rising, so there is tendency towards balance. But the mechanism of differential wage rates is weak and sluggish in its operations.

It was found in the 1930's that British and German costs were roughly equal, while productivity in comparable lines was double in the United States, and wage rates 50 percent higher [33, Rostás, 1948]. Then the high real-wage country was the cheap labor country.

In recent times, with both money-wage rates and productivity rising everywhere, there has been some tendency for a faster

rise of wage rates to accompany a faster relative increase in productivity [15, Kahn, 1974], but this has been much too weak to maintain equilibrium. It has been supplemented by large deliberate appreciations and depreciations of exchange rates, but these have proved to be less efficacious than economists once expected. Still unbalance between the major industrial countries continues to cause great strain in the international financial system [7, Fetherston *et al.*, 1977]. (The problems of trade with so-called developing nations and with the OPEC countries are not discussed here. Nor is the trade of the socialist world. There are more than enough questions to raise in one article about the problems of the advanced industrialized capitalist nations.)

The authorities of each nation desire to see a surplus on its current account balance of payments, though not all can succeed.

A surplus of exports is advantageous, first of all, in connection with the short-period problem of effective demand. A surplus of value of exports over value of imports represents "foreign investment." An increase in it has an employment and multiplier effect. Any increase in activity at home is liable to increase imports so that a boost to income and employment from an increase in the flow of home investment is partly offset by a reduction in foreign investment. A boost due to increasing exports or production of home substitutes for imports (when there is sufficient slack in the economy) does not reduce home investment, but creates conditions favorable to raising it. Thus, an export surplus is a more powerful stimulus to income than home investment.

In the beggar-my-neighbor scramble for trade during the great slump, every country was desparately trying to export its own unemployment. Every country had to join in, for any one that attempted to maintain employment without protect-

ing its balance of trade (through tariffs, subsidies, depreciation, *etc.*) would have been beggared by the others.

From a long-run point of view, export-led growth is the basis of success. A country that has a competitive advantage in industrial production can maintain a high level of home investment, without fear of being checked by a balance-of-payments crisis. Capital accumulation and technical improvements then progressively enhance its competitive advantage. Employment is high and real-wage rates rising so that "labor trouble" is kept at bay. Its financial position is strong. If it prefers an extra rise of home consumption to acquiring foreign assets, it can allow its exchange rate to appreciate and turn the terms of trade in its own favor. In all these respects, a country in a weak competitive position suffers the corresponding disadvantages.

When Ricardo set out the case against protection, he was supporting British economic interests. Free trade ruined Portuguese industry [36, Sandro Sideri, 1970]. Free trade for *others* is in the interests of the strongest competitor in world markets, and a sufficiently strong competitor has no need for protection at home. Free trade doctrine, in practice, is a more subtle form of Mercantilism. When Britain was the workshop of the world, universal free trade suited her interests. When (with the aid of protection) rival industries developed in Germany and the United States, she was still able to preserve free trade for her own exports in the Empire [13, Eric J. Hobsbawn, 1968]. The historical tradition of attachment to free trade doctrine is so strong in England that even now, in her weakness, the idea of protectionism is considered shocking.

After 1945, the United States was far and away the strongest competitor and used her great influence to arrange free trade agreements, GATT, IMF, *etc.*, but she has no objection to protection for her

own industries when they are strongly pressed by Japan.

What Now?

The present situation raises new questions. The long boom of twenty-five years after 1945, interrupted only by shallow and local recessions, blew up into a violent inflation in 1973 and collapsed into a world-wide slump. The economists had sunk into complacency and now do not know what to say. Relatively high employment and continuous growth in the indicators of production and accumulation had been taken to show that an age of permanent prosperity had set in. It was natural scientists, not economists, who first pointed out that exponential growth in perpetuity is an impossibility for any physical entity. On the plane of doctrine, Keynes had been smothered in the neo-classical synthesis, and a new "dynamic" version of Say's Law had come into operation.

Now that the Juggernaut car has come more or less to a halt, we must take stock of the problems that its passage leaves behind.

The consumption of resources, including air to breathe, has evidently impoverished the world; the long struggle over relative shares has implanted a chronic tendency to inflation in the industrial countries, which no resort to monetary stringency can master. The uneven development of trading nations has set insupportable strains on the international financial system. Growth of wealth has not after all removed poverty at home, and "aid" has not reduced it abroad. Now unemployment exacerbates social problems and embitters politics.

In this situation, the cry is to get growth started again. The European countries in a weak competitive position plead with West Germany to spend money on something or other to improve the market for the rest so that they can permit employ-

ment to increase. Any up turn in the indicators in the United States is greeted as a sign that we shall once more be pulled up out of the slough.

Here we come upon the greatest of all economic questions, but one that in fact is never asked: what is growth for? Under the shadow of the arms race and its diffusion into the Third World, perhaps no merely economic questions are really of great importance; but even if it is a secondary question, we ought to consider it.

The obvious answer is that there is apparently no way to reduce unemployment except by increasing industrial investment. There is no question of choosing between alternative uses for given resources. Past development has dug deep grooves by physical investment, creation of financial property, and specialization of the labor force; existing resources cannot be redeployed; our only hope is to pour more resources down the old grooves.

The problem of the use of resources, and the institutional setting that controls it, cannot be confined within the bounds of theoretical economic analysis, but the economic aspect of the matter ought to be discussed. What is the object of production in a modern industrial nation, and if we could have more of it (through technical change and capital accumulation), what should we use it for?

For the classical economists, such a question did not arise. The wealth of a nation was its investable surplus; real wages were part of the cost of production, like fodder for cattle, and luxury consumption was deprecated; the neoclassicists conceived the object of production to be provision for consumption. But consumption by whom, of what?

The question was supposed to be settled by appeal to the individual's freedom of choice, but there are three very large objections to such a solution.

The first arises from inequality of the distribution of purchasing power between

individuals. The nature of accumulation under private enterprise necessarily generates inequality and is therefore condemned to meeting the trivial wants of a few before the urgent needs of the many.

Do we want renewed growth in order to maintain and enhance disparities in consumption? Have we not become disillusioned with the doctrine that "disease, squalor and ignorance" will soon be cleared away by the "trickle down" from ever-growing conspicuous consumption?

Secondly, many kinds of consumption that are chosen by some individuals generate disutility for others. The leading case is the spread of private motor cars—the higher the level of consumption, the more uncomfortable life becomes; this fact is painfully obvious, but orthodox doctrine has not been able to accommodate it.

Thirdly, to keep the show going, it is necessary continually to introduce new commodities and create new wants. In a competitive society, a growth of consumption does not guarantee a growth of satisfaction.

Here is the problem. The task of deciding how resources should be allocated is not fulfilled by the market but by the great corporations who are in charge of the finance for development.

These questions involve the whole political and social system of the capitalist world; they cannot be decided by economic theory, but it would be decent, at least, if the economists admitted that they do not have an answer to them.

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