THE ECONOMIC THEORY OF SOCIALISM

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CHAPTER ONE

IN THE BEGINNING

THE ECONOMIC THEORY OF SOCIALISM

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There is a philosophical theory identifying life with change. The process of evolution is one of encountering and dealing with obstacles, of victory and defeat, of progress and regress, but always of a changing of the status quo. Upon arrival at Utopia, where no change can be for the better, the process stops, and life ends. This realization of the truism that living is striving recurs again and again in modern civilization where forces are ever at work to change the course and direction of the search for happiness. It is the purpose of this thesis to examine and analyse the theoretical soundness and practicability of socialism - of change from the present capitalist system of economics.

The function of the economist is to study and understand the machinery of production, distribution, and consumption, and with the knowledge thus gained to advise methods of social amelioration. It is, therefore, his urgent duty to investigate the economic efficacy of the type of wholesale planning for improvement that is advocated by socialist parties which are becoming more powerful in contemporary British and Canadian politics.

Both capitalism and socialism are attempts to solve the central economic problem, viz. the rational allocation of scarce resources among alternative uses. It follows logically that the better system, economically speaking, will be the one with the better solution. By glancing around the industrial world one can see how much, or how little success capitalism is having with its solution. Unfortunately, there is no laboratory in which to test socialism by duplication of all contributory factors.

Even without some such practical proof, socialists present a strong case to show that their system, by doing away with specific capitalist institutions, will remove the evil effects generated thereby. The first step towards clarification of the issue would thus seem to be to expand the key words of that last sentence: "institutions", and "effects". Therefore, there follows a brief inspection of capitalism, looking first at its basic philosophy and then at the evident results of its application. Perhaps there will emerge a more positive answer to the question whether the cure prescribed by socialists is satisfactory.

The institutions which characterize capitalism are freedom of contract and private ownership of property. These give the individual the right to use or exchange anything of economic significance he may own in any way he pleases. And that statement leads to the very core of capitalist philosophy - the belief that the equilibrium of rational allocation can be arrived at without conscious control over the operation of the system. This involves an assumption on the part of the capitalist that economic life is self-equilibrating, implying that, in order to satisfy human needs and purposes, all that is necessary is to allow each individual, in his capacity as an economic agent, to act only in his own self-interest. His freedom to pursue his private profit will blind him to the consequences of his acts upon others. To uphold such ideas is to believe that order is so preordained in human affairs, that uncontrolled individual action will produce universal economic ophelimity. This seems to be at the root of the troubles of the capitalistic world.

Having surveyed the foundations, one is not surprised to find evident manifestations of economic chaos in the modern world: the waste of natural resources, the duplication of effort, the disharmony of regional distribution, the pauperization of labour, and above all that disastrous economic rollercoaster called the business cycle. It would seem that the capitalist economic philosophy, that freedom brings order, has contributed largely to a partial negation of order. Where is the economic harmony that orthodox economists predicted would follow from the adoption of the doctrine of laisser-faire? The answer to that is simple: the balance of an ideal economic structure depends upon postulates of free competition which imperfectly reflect present conditions. It is necessary to use care in examining the system, viewing it as it is rather than as it might be.

The importance of time in equilibrium analysis demands that attention next be focussed upon the difficulties of discounting the future. When that is the responsibility of the individual, as in capitalism, proper evaluation becomes unlikely. The pressure of the competitive market, which forces the inefficient entrepreneur out of business, brings man's inherent capacity for error to the fore, because producers must base their plans on estimates of future demands and future costs. The more complex and costly industry becomes, the more diversified and varied is demand and the more difficult the problem of accurate foresight. Moreover, mistakes will multiply with the opportunity for them. The conclusion, therefore, seems warranted that both increased productivity and dynamic disturbances must be accepted as being inevitable results of a high degree of differentiation in an individualistic world.

And now let us go one step further in investigating the importance of individual estimate in investment policy. While capital movement will turn on changes of attitude towards investment on the part of individuals engaged in the manufacture of capital goods these individuals do not act as isolated units. What actually happens is that many follow the lead of one captain of industry, and cause a disproportionate swing in investment - a jerk in industrial development.

Individual inaccuracy in production decisions is important by itself, but it becomes more important when it is reflected in the actions of some or all competitors. It is unfortunate that the field of investment should at the same time be so important and so liable to error because of the extent of the decisions which must be made. Moreover, the individual cannot fail to be ignorant, in some degree, of investment in complementary industries in which an optimum pattern of expansion or contraction will require coordinated calculation of future activity. And not only is investment in like industries important, but also the whole course of capital accumulation, in that it affects the general price level. It is too much to expect of each individual producer, that he be aware of the danger and be prepared to counteract the causes of such a general price shift, by synchronizing his own production pattern with those of all other producers. Even partial ignorance will produce spasmodic development and industrial fluctuations.

All considerations thus far point to the conclusion that capitalism involves a large measure of anarchy. Even if that were the whole story it must be remembered that by denouncing the shortcomings of capitalism one does not prove the benefits of an alternative system. It is an overprevalent human weakness to compare the concrete shortcomings of a real thing which we do possess with the abstract perfections of an imaginary thing which we do not possess.

But there are two sides to the story. The modern capitalist state is highly efficient in the technical sense, being capable of producing large quantities of goods from its resources. This is shown with striking force by the severe economic maladjustments that it endures without collapse. Think of the luxuries that the economy can afford because of technological efficiency: luxuries like large-scale unemployment, rigid limitation of production and trade, and actual destruction of goods already produced. These commonplace features of the last depression, however grim they may have seemed to the new world, were relatively mild. Dissatisfaction at the standards of the poorer sections of society must be tempered by the consideration that these compare favourably with those of the individual in many periods of history. The alternative could be worse.

And now, before starting on the main body of the argument, it would be wise to present a formal definition of socialism. The one selected is from the writings of H. D. Dickinson:(1) "Socialism is an economic organization of society in which the material means of production are owned by the whole community and operated by organs representative of and responsible to the community according to a general economic plan, all members of the community being entitled to benefit from the results of such socialized planned production on the basis of equal rights." The common end of all socialism is the improvement of the position of the property-less classes of society by a redistribution of income derived from property.

This thesis is not intended as an exposé of capitalism. The remarks above are in the nature of reminders that our present set-up is not perfect. If socialism is to be given the opportunity to experiment on improvement, and political trends indicate that this is not unlikely, there should be a common understanding of all phases of the debate. It is no part of my intention to argue pro and con and produce a result in favour of one side or the other, but rather to review relevant economic considerations. A conscious attempt will be made to avoid

(1) H. D. Dickinson, The Economics of Socialism, pp. 10-11

hackneyed and harmful clichēs, to scrape away the repugnant layer of propaganda and view the socialist system in the dispassionate light of economic theory.

CHAPTER TWO

THE PROBLEM

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An examination of early socialist literature leads to the surprising conclusion that the exponents of change have neglected to answer the central economic problem, viz. the rational allocation of scarce resources among alternative uses. Neither socialist nor economist had made a definite statement of the general principles to be followed in directing the economic activity of a socialist community before 1930.(1)

The principal explanation of this omission is found in the labour theory of value which dominated socialist thought for so long. It states that labour, as the sole source of value, is the sole source of income. Payment for work should be in notes representing some standard unit to which all types of labour can be reduced. Reward a certain number of hours work with an equivalent of labour notes, and sell all products at a price corresponding to the number of labour hours required to produce them. Thus there is a simple equivalence and nothing that can be called a pricing problem.

It is obvious that this Marxian solution is inadequate. The idea that labour is the only source of value, and therefore the only element worthy of consideration in a state pricing system is demonstrably false. But it is not the purpose of this paper to refute once more the labour theory of value. Suffice to say that belief in this theory was a major cause of the non-exploration of economic problems by socialists.

(1) H. D. Dickinson, The Economic Basis of Socialism
Political Quarterly, Vol. 1, No. 4, 1930

In addition to the labour-value fallacy, blame must also rest on the Marxian method. In the Nineteenth Century, the Classical School delved deeply into analytical economics in considering the competitive method of distributing available resources among alternative uses. With the eclipse of the Classical School by the Historical, the method of analysis vanished temporarily, and with it the allocation problem it was so well equipped to tackle.

A final factor causing a rift between socialism and economics was Marx's disagreement with the historical school on several fundamentals. Marx argued that most economic phenomena arise not from permanent causes but from particular historical developments of a transitory nature. What good then is an analysis to solve economic problems when the phenomena creating them are transitory rather than permanent (in the opinion of the great leader of socialist thought). And his dialectical view of history influenced his followers in yet another direction - it encouraged a fatalistic belief that socialism was inevitable, and that its economic problems would solve themselves (or at least could not be tackled until the socialists gained political control).

With such apathy toward economics, it is not strange that the hundreds of books, pamphlets, and treatises on socialism are concerned with history, sociology, and political science. Writers in these fields felt, in the first place, that they had insufficient knowledge of technical economics and, in the second place, that the question of the desirability of socialism was not essentially an economic one (the latter being an opinion held by most economists who have applied themselves to the subject in the last ten years).

But if, for the above reasons, socialists neglected the discussion of the central economic problems, what was the excuse of Marshall and of the Austrian and Lausanne schools? They suffered from a supersaturation of capitalism. Their analysis of static equilibrium assumed capitalist institutions because they were brought up in that tradition. Their concentration on pure capitalist theory was excusable because they lived in a capitalist economy.

All of which is so much water under the bridge. Whatever the causes which produced neglect of economic principles in socialist circles, that omission has been rectified to a great extent. The honour for bringing the problem to light belongs to Professor Ludwig von Mises, the great Socialist-baiter, who threw out the challenge that rational calculation was impossible in a socialist economy. As Oskar Lange (1) sarcastically remarked: "Both as an expression of recognition for the great service rendered by him, and as a memento of the prime importance of sound economic accounting, a statue of Professor Mises ought to occupy an honourable place in the Great Hall of the Ministry of Socialization of the Socialist State."

Before examining the dogmatic assertions of Professor Mises and his followers, it would be well to re-establish the

(1) O. Lange, On the Economic Theory of Socialism, pp. 57-58

necessity for pricing in economic calculus. The fundamental nature of this concept might easily be forgotten in the investigation of a new system because it is so common as to be unnoticed in everyday business. In fact, the complex modern economic structure functions so unobtrusively that it is easy to take for granted the interrelation of its parts, and assume the present coordination in an alternative state without a deliberate and accurate costing scheme. The following should suffice to emphasize the need for this yardstick of comparison.

An entrepreneur with a production decision to make must compare all factors of production with one another, not as to powers of present satisfaction, but with respect to powers of producing satisfaction in the future. He is faced with a bewildering array of different combinations of land, labour, and capital, only one of which can be the optimum. For example, should these x tons of steel be used to make machine A or machine B, or both, and if both, how much of each? What other materials and labour need shifting? Do technical conditions impose rigidity on the scheme, or can some variation be practised for more economical production? What will be the effect on other production fields where use is made of the same materials?

One could attack such problems by the trial and error method but only under static conditions, where the effect could be compared after every trial. As it is, the questions and the answers are changing all the time. The demands of consumers and the potentialities of productive resources alter rapidly in comparison with the time which would be required to appreciate the results of a fraction of the decisions; the labourers age and the capital goods wear out before they can be tried in more than a few occupations. And the only organization in which the decisions could be arrived at by unaided judgment, and the first trial approximate correctness, would be, of necessity, simple in the economic sense, e.g. an isolated collective farm run by primitive methods.

Fortunately, instead of dealing with the complex economy as a whole, the entrepreneur has a means of breaking down his decision into manageable parts. He uses pricing machinery to reduce all the factors entering the production process to a common denominator, and thus make each new move directly comparable with some alternative move. With an evaluation affixed to every factor of production, an accounting system becomes practicable, giving eyes to an otherwise blind economy. Such a process of judging the efficiency of various methods of production and of various combinations of productive agents is indispensable to the securing of economic apportionment of these productive agents to different employments. In fact the conclusion can be stated even more strongly: no economic system can endure without a sound costing scheme. And unless the socialist state knows its cost, all good intentions with respect to the ethics of sharing wealth will be frustrated by its ignorance as to what ought to be done in the technical field of rational production.

The above remarks will serve as an introduction to the attack on socialism by Professor Ludwig von Mises and its elaboration by Professor Georg Halm.(1) Professor Mises builds an apparently logical condemnation of socialism along the following lines. The essence of socialism is that all means of production are the property of the community. Now in the field of consumption, goods are chosen on the basis of a judgment or valuation in terms of common units of money. These preferences attain comparative and relative significance in the exchange relationships which are expressed as prices on the market. But there is no market for exchange of the factors of production, because these are all owned and used by the state, and are thus "res extra commercium", incapable of being priced. In Mises' words:(2) "Because no production good will ever become the object of exchange, it will be impossible to determine its monetary value."

Mises goes on(3) to say that the uncertainty of future conditions will make calculation itself uncertain. The basis for this calculation will be the pattern of market dealings. With no market, there can be no basis. He admits that if the labour theory of value were a valid one, then the economy would be provided with an objectively realizable unit of value, permitting economic calculation without exchange. But he dismisses that theory with comments on the difficulty of measuring qualitative differences, and of omitting the other important factors of production. According to him, calculation

(1) L. von Mises, Economic Calculation in the Socialist Commonwealth; G. Halm, Further Considerations on the Possibility of Adequate Calculation in a Socialist Community (Collectivist Economic Planning, ed. Hayek).

(2) L. von Mises, op. cit., p.

(3) The rest of Mises' argument is a deduction from this dogmatic premise and accordingly must be judged on the validity of this premise.

in terms of labour would necessitate an arbitrary ratio for substituting simple for complex labour, and this would exclude its use in rational economic administration. Mises concludes his essay with a comment on the vanishing of responsibility and initiative with the substitution of public for private ownership, which argument will be considered in the concluding chapter.

In introducing his "Further Considerations on the Possibility of Adequate Calculation in a Socialist Community", Halm explains the fundamental distinction between communism and socialism. In oversimplified language, communism means state control over production and consumption, whereas socialism means state control only over production. With free consumers' choice, consumption governs production. Therefore, if production is to be planned, Halm asserts in typically dogmatic fashion that this freedom must be relinquished.

Halm's argument begins with a survey of the principles of the capitalist economy. He calls the capitalist economy a pure market economy, in which entrepreneurs are motivated by profit. Since the entrepreneurial margin of profit is determined by two sets of prices - that of the factors of production and that of the resultant product, the deciding element in the economy is the process of price determination. Each entrepreneur will operate to his private advantage (and thus to the consumers' advantage, under competitive conditions) by varying industrial technique. The criterion for any technical process will be its ability to produce at lowest total cost. The student of economics must tell the student of technology which process gives the most profit. Thus the decision on the processes of production must be made both by the technical works manager and the economic entrepreneur. The guidance afforded the latter by the pricing process is indispensable.

When he turns to the socialist economy, Halm attempts to show the incompatibility of planned production and freedom of choice. Though the latter guarantees that consumption goods will be priced, these prices will have no significance for the central authority without prices being set on the factors of production, to which the prices of consumption goods can be compared. He refers critically to Eduard Heimann's idea that the valuation of consumption goods is reflected in the value of production factors, connected by an elastic string which transmits the prices of consumption goods backwards. Thus Heimann would say that you can calculate the significance of the factors of production if you are given the prices of their products. But Halm corrects this view by pointing out that when the prices of the production goods are derived from the prices of the consumption goods they create, no comparison between the two sets of prices is relevant. And economic efficiency can be measured only by the existence of profits, and these can be computed by a comparison of the cost-price (the price of the production-goods) and the selling-price (the price of the consumption-goods). Only then will economic management be rational.

Halm is concerned mainly with the difficulty of sharing credit for the product between the three classes of factors - labour, land, and capital - where the last two are publicly owned. As he says, if labour were the only factor of production to be considered, then the total income would be the total wage and would buy the total product which would cost the total wage. And it is true that if the state owned all factors of production, it would not have to pay for the use of the land and capital which it already owned. The state would fix the demand in the labour market and the supply in the commodity market and thus the price in both. Utilization of the unique monopoly position would make these actions purely arbitrary.

This question appears sufficiently important to Halm to merit considerable attention. He reviews the theory of surplus value, picking out what he considers to be the fundamental flaw - which he explains as follows. Socialists call the capitalist economy a social order based on a relationship of exploitation between the owners of the factors of production, and the consumers. This "monopoly" relationship yields a profit in the form of surplus value, which surplus would be abolished by transferring ownership to the state. The socialists attack interest as a price which is paid because of the scarcity of capital goods, when the only scarce factor is the labour that produces them. Thus the only primary factor of production is labour, because all the produced means of production, all the capital goods, can ultimately be resolved into the labour necessary to produce them.

But, says Halm, since the supply of capital is scarce relative to the demand (which is insatiable), capital must be given the status of a primary factor of production, possessing a particular value and dealt with in calculation on the basis of that value. Most troubled is he over the necessity of making allowance for interest, because of the time element. Labour is used to produce consumption goods or to produce capital goods. The first will satisfy a need now, and the second a need in the future. The difference between the importance of the two needs, since current wants have a satisfaction priority, must enter the economic calculus in the form of the interest rate. Halm calls this perhaps the most serious objection to socialism - that rational interest calculation, the need for which is urgently dictated by economic considerations, has no place in socialist economics.

Halm further discusses the capital market. Pricing will be possible only when supply and demand meet in a market. There can be no demand and supply when capital is at the outset in the possession of its user. With all capital owned and allocated directly by the community, a rate of interest determining the relative needs for capital can no longer be determined. An arbitrary fixation of the interest rate by the central authority would almost inevitably be in error because the scarcity of capital would be unknown relative to the demand. The demand for capital is, <u>de natura</u>, indirect, even when consumption goods have a determinate market price. And how will the values of two capital goods be compared since, because capital goods are produced from labour and capital goods, one must ascribe a value to capital in the first place to determine the cost of using capital? To use a fictitious rate of interest in order to calculate a value of capital goods that may be taken as given in determining the rate of interest is to argue in a circle. The conclusion is that there can be no standard of comparison for the values of capital goods; the technical basis of the process of interest determination vanishes when capital goods cannot be reduced to a common denominator.

Rent is in the same category as capital. For our present purpose it will suffice to indicate the presence of the same problem by a quotation from Gustav Cassel (1) emphasising the fact that the difference of product resulting from the use of land of different degrees of advantage is a fact for which socialists must account in an economic fashion. "The significance of ground rent as a regulator of the economically sound use of capital and labour on the land, the extent of the cultivated area, and the relative prices of the various products of the land would be essentially the same under socialism as it is now."

The pith of the problem of evaluation of the factors of production in a socialist state is best expressed in this quotation from Halm: (2) "For the pricing process....is an endless network of exchange relationships from which individual pieces cannot be arbitrarily torn without injuring the rest. If the threads of these relationships are cut, by making it impossible for all the material means of production to enter into a pricing process based on free individual exchange, then those parts of the pricing process that remain will lack that tautness and interdependence which is the 'sine qua non' of an effective

(1) G. Cassel, The Theory of Social Economy, p. 279
(2) G. Halm, op. cit. p.169

exchange economy".

Halm then criticizes some typical socialist arguments, on perhaps stronger logical ground than that supporting the preceding parts of his discussion. The first is the evolutionary theory which regards monopolistic capitalist combinations as forerunners of socialism. Halm correctly points out that, although members of the individualistic economy do tend more and more to organization, they still need the constant guidance of the pricing process, something with which a general planning of the whole economy would have to dispense. He says that tendencies which are working out now without destroying capitalism, cannot be called precursors of change to a planned economy. He adds the note that such proposals as socialization of credit and nationalization of banks would mean that in these fields, the guidance of the consumer's choice would be superseded by the arbitrary actions of the government and therefore should be considered as communist rather than socialist. This is true also of any policy which neglects the consumer in setting up an arbitrary program of production.

Halm dismisses those who point to the success of public undertakings with the assertion that the economic manifestations of the latter must conform to the general pricing process. In other works, these undertakings exist only because they are supported by the commercial organism surrounding them. He enters the field of sociology to make the point that there will have to be a change in the general attitude to economic life, for something new must be discovered to replace the stimulus to good service found in profit participation.

And now, in conclusion, to summarize briefly the arguments advanced by Halm and Mises. They hold that the impracticability of socialism may be demonstrated directly from economic theory. When there are different purposes competing for limited resources there arises a problem of value, which, they say, can be solved only by the objective data of a free market. This is impossible under socialism, because rationality in economic calculation, the product of the free market era, will disappear.

But it seems that, to achieve quantitative consistency in the distribution of resources, all one would need is a priority scale, whether it be determined by the free market or otherwise. There is no logical proof that the free market is the only method of establishing such a priority scale. The solution of the problem of the allocation of producers' goods requires three elements, all capable of determination without a market for these goods. The first is the physical productivity of the resources in different uses, which is a purely technical problem. The second is the amount of available resources, also determinable without entering the market. The third is the valuation of the product on the consumers' market. This value is determined by demand and supply. The determination of demand is effected through the freedom of choice of the consumer; the determination of supply is a distributive problem to which an answer will be attempted in subsequent chapters.

In conclusion tribute should be paid once more to Halm and Mises, for, although their logic was faulty and their conclusions erroneous, the problem they presented was a worthy one, and vital to the advancement of socialism in intellectual circles.

CHAPTER THREE

THESIS AND ANTITHESIS

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The purpose of this chapter is to present the initial reply to Mises' attack on socialist economics. This reply provoked much discussion among a small but interested group, whose verbal battles on the subject have been presented for public consumption in the pages of the Economic Journal and the Review of Economic Studies. Although there are marked differences of opinion between the economists participating in the discussion, they have a common purpose, viz. to prove that, contrary to Mises, economic calculation can be rational in a socialist state.

The first economist to go to the rescue of socialism was H. D. Dickinson,(1) in an article in the Economic Journal for 1933. His opening remarks refer to the varying popularity of different anti-socialist arguments during the last century. The earliest of these was the Malthusian bogey of over-population. The spotlight shifted next to the question of incentive. Now, the charge is that, since a socialist economy cannot have a pricing system by which to guide the allocation of its productive resources, it must degenerate into a mêlange of random guessing. Dickinson proceeds to show the theoretical possibility of a rational pricing of production goods in a socialist economy.

The foundation for his argument is a set of assumptions creating a hypothetical state more easily visualized than the real world. Principal among these are the following: all goods for personal

(1) H.D. Dickinson, Price Formation in a Socialist Community, Economic Journal Vol. Xliii - June, 1933, p.237

consumption are privately owned; the factors of production are publicly owned; production is organized in a pyramid with autonomous corporations at the base and grouped according to their technical nature into trusts; in turn these are grouped into industries, supervised by some supreme authority,(1) an economic council with the final word in all matters involving production and distribution.

Dickinson draws an important distinction between the fields of individualistic and of communal consumption. The line of demarcation is between those goods and services that must be chosen for the individual by the individual himself, and those goods and services that are not provided by the normal operation of supply and demand on the market, but are provided for the group as a whole by group action, e.g. police department, fire department, health services, education, etc. Since this latter field of community enterprise is even in the present exchange economy almost completely socialized, little or no difference would be involved in the transition from capitalism to socialism. Therefore in the discussion Dickinson restricts his exposition to the field of individualistic consumption.

He postulates the use of money, as at present. His final assumption is a simple but vital one: All enterprises in his hypothetical economy work within glass walls, i.e. there is

(1)In the various writings on the subject, different names have been used for this body. Dickinson, in this article, uses the term "Supreme Economic Council". This has been discarded here to prevent confusion with the body in the U.S.S.R. of the same name and a different purpose. For the sake of continuity the term "Central Planning Board" will be used throughout this thesis. This latter term is the one used by Oskar Lange in the most important work in the field of socialist economic theory, dealt with in Chapter Five.)

complete publication of all relevant statistical data, including output, costs, sales and stocks.

The pricing problem in such an economy is double-barrelled - there must be price determination of both consumption goods and production goods. Dickinson dismisses the first in short order with the following explanation. Selling is done on the market by sales agencies who keep stocks on hand "at a level which will just suffice for current needs" (1) and replenish them by orders sent back to the producing corporations. The agencies will sell "on the basis of what the market will bear" (2) by adjusting price to avoid a surplus or deficit of the stock. Thus will the statistical services attached to these selling agencies, be able to construct demand schedules for consumption goods. Dickinson admits the theoretical difficulty presented here, where each demand for one commodity is a function of the prices of all other commodities besides its own. (3)

He then shows the way to determine the prices which the producing corporations will charge the selling agencies for the goods they order. These orders give the production managers demand

(1) H.D. Dickinson art., op. cit. p. 240
(2) H.D. Dickinson art., op. cit. p. 239
(3) The two quoted phrases indicate by their indefinite terminology that Dickinson has failed to grasp the nature of the problem. Price is determined on the market by demand and supply. He speaks at one time of adjusting supply to answer current needs, which supposes that price is fixed, and that on the basis of the fixed price, demand can be ascertained. And then he says that price should be adjusted to keep the supply coordinated with the demand. Such a market cannot fail to be arbitrary where of the three items which are to be tied together by exchange relations, two must be determined by authorities, and are therefore arbitrary. Where x plus y equals z, all the unknowns can be calculated only where two are known from the start.

schedules for their goods. And from these they can construct demand schedules for goods of a higher order. This promises to be a complicated problem of valuation because the goods are probably in joint and composite demand and supply, but Dickinson claims that it is not impossible. Thus one can work back to the ultimate factors of production - land, natural resources, labour - the supplies of which are all known. Thus prices can be calculated all the way down the line, always equating supply and demand. Successive approximations will give a true economic figure for costing purposes.

Dickinson elaborates further on the fact that the supply of the ultimate factors is known. The supply of natural resources is independent of market changes. The supply of labour will depend on socialist policy. Either the community will pay to all the same wage, regardless of occupation, in which case there must be an accounting price arbitrarily attached to each job for the purposes of costing, or the community will pay according to the value of the services, in which case the supply of labour is a function of the wage offered, and supply schedules can be drawn up for each kind of labour.

In summing up his discussion of the pricing of production and consumption goods, Dickinson claims the possibility of mathematical determination of all prices necessary for a complete and accurate allocation of resources. Four functions are required for this purpose - two of them matters of technical calculation and the other two of economic calculation. Technically there is required: (a) a function to connect the unit of the consumption good with the quantities of the primary factors required to make the unit, and (b) a function to connect the selling price of the consumption good with the sum of the prices of the primary factors of production. Economically there is required: (a) a demand function for every consumption good, and (b) a supply function for every primary factor of production.

To make a complete costing system, there must be interest calculation and surcharge for risk. For the first, each undertaking can create a capital demand schedule at various rates of interest. From this the Central Planning Board can compute aggregate demand. With the interest rate and the amount of accumulation connected by an equation, the Board need only fix one and the other is automatically determined. Determination, in his opinion, will not be as exact as in an individualistic community, but will be a rather arbitrary matter of government policy. In the Soviet, for exampl the accent was put on production in the heavy industries. The result was unparalleled armament production coupled with neglect of the immediate needs of the consumer.

As for the surcharge for risk, the calculation would still be largely a matter of guesswork at first, because free consumers' choice on a market presumes a demand unpredictable at least to some degree. But statistical treatment could remove some of this unpredictability. The very planned nature of the economy, with its aforementioned glass walls, render this a field where socialism shows to advantage.

Little else of importance remains in Dickinson's article. He runs over many possible advantages of socialist over capitalist costing without proof in most cases. For example, he claims that the Central Planning Board, with the data at its disposal, will be able to balance the relative worthwhileness of various methods of production, with improved calculation of social cost as opposed to individual cost. But a positive contribution is the mention of a Social Fund into which go profits, interest on capital, and return to natural resources, and out of which would come the monies to pay for the cost of communal consumption, and provide for capital accumulation. This fund could be augmented by some levy or tax on earnings.

Noteworthy here is the reminder that Dickinson's system is predicated upon consumers' sovereignty in market operations. The argument as to whether it is in the best interests of society and the consumer to let the latter choose for himself, is deemed of sufficient importance to warrant devoting the next chapter to its discussion.

Dickinson's essay met with considerable criticism in the writings of fellow economists. Nevertheless, as a first attempt to apply to socialism the economic principles which were born and developed in the study of capitalism, it was as successful as could be hoped. It is so easy to err in the transplanting of institutions from one society to another, because of the difficulty of separating common elements from peculiar ones. Since other methods of approach will be presented, the outline of errors which follows does not aim at completeness, but rather at an indication of the places where mistakes are most liable to occur in such attempted solutions.

First, in an article entitled "Economic Theory and the (1)

(1) Maurice Dobb, Economic Theory and the Problems of a Socialist Economy, Economic Journal, vol. Xliii, December 1933 - p.588

Problems of a Socialist Economy", Dr. Maurice Dobb indicates an apparently unavoidable dilemma in Dickinson's economy. He points out that the consumers' market will accurately evaluate demand only where there is complete equality of reward, for then one dollar will have the same meaning in subjective terms for each individual. If each labourer were paid the same regardless of whether he were skilled or unskilled, or whether it cost much or little to train him then all labour costs would be the same. But for rational control of production these costs must differ for their value to the product is different. For these differing values to enter entrepreneurial calculus, the skilled worker must be given a higher wage than the unskilled, which action would vitiate the consumers' demand in its manifestations on the market. Thus adequacy in the consumers' market automatically means inadequacy in the producers' market, and vice versa. The conclusion must follow that it is impossible to reconcile the equilibrium of demand and cost in the market with equality of individual income, since the latter necessarily makes it impossible for cost to reflect the varying scarcities of different kinds of services.

But, as Mr. Dickinson pointed out in a reply (1) to Dr. Dobb's article, this is merely asserting "a necessary connection between things which are necessarily connected only under capitalism." There need be no correspondence between the value placed on labour and the wage paid to labour. The former is necessary for accurate costing and need be an accounting item only, rather than an actual

(1) H. D. Dickinson, Problems of a Socialist Economy - A Reply, Economic Journal, vol. XLiv, March, 1934 - p. 152

sum of money in the pay envelope. The actual distribution of income could be equal for all, or according to need, or by any principle, adopted by the government as ideal. Thus costs and needs can be given simultaneous expression by the separation of labour-cost and labour-wage.(1)

A second point which has often been brought up by economists as vital to the workings of the socialist economy is that the theoretical method of central planning to meet the consumers' needs is insoluble on a practical basis. The argument followed here is taken from a book by Lionel Robbins, entitled "The Great Depression".

Robbins reasons that it is one thing to sketch the requirements of a plan, and another thing to put it into execution. With a free market on which the consumer can register his preference for one commodity over another by his purchases, all that a rational plan need do is distribute the factors of production to the job in which they will produce the most valuable commodities. This involves knowledge of the relative efficiencies of the factors of production in producing all the possible alternatives. One need only think of setting to work with a pencil and a piece of paper to calculate demand schedules for all the different commodities, and the product resulting from each of the various

(1) To have each occupation paying the same wage regardless of its nature would appear to necessitate authoritarian labour distribution, for everyone would want to work in the most pleasant job. It would seem sufficiently important in order to guarantee freedom of choice of occupation to the individual, to retain such inequalities of reward which render labour distribution automatic, rather than controlled. As Dickinson points out, to pay each worker according to the value of his work does not necessarily involve serious inequality and would certainly simplify accounting.

possible combinations of the factors of production. It is possible to obtain a satisfactory answer because one knows what is required and one also knows the method of utilizing the given data. But the nature and amount of concrete information required to attempt a numerical solution will perhaps better be appreciated from a glance at an essay (1) by Enrico Barone, in "Collectivist Economic Planning." Barone follows up the work of Pareto by defining the principles of direction of the collectivist state in a series of equations. His argument will not be discussed because of its technical nature, but his conclusion is that the solution of all the innumerable systems of linear equations is inconceivable in a dynamic society.

Robbins (2) agrees wholeheartedly, saying that "in practice this solution is quite unworkable. It would necessitate the drawing up of millions of equations on the basis of millions of statistical tables based on many more millions of individual computations. By the time the equations were solved the information on which they were based would have become obsolete and they would need to be calculated anew." Thus, a practical solution by Paretian equations to find the inducements necessary for alternative kinds of investment, or to adjust production to meet the preferences of consumers, is impossible.

Under competition, as Robbins points out, the solution is somewhat different, because the entrepreneur is a seller in one market and a buyer in the other. He keeps his finger on costs

(1) E. Barone, The Ministry of Production in the Collectivist State, Appendix A, Collectivist Economic Planning (ed.Hayek)
(2) L. Robbins, The Great Depression, p. 151

by knowledge of the producers' market and on prices by knowledge of the consumers' market. When costs fall below prices in one line, it is an indication of the consumers' preference for that line, and vice versa. Thus competitive conditions provide a short cut to the solution of the equations whose multiplicity is such as obstacle to planning.

To make computations of relative profitability there must be, says Robbins, a market for all elements which enter into cost accounting. But the central authority has eliminated the competition of entrepreneurs as both buyers and sellers, by the very definition of centralized disposal of the factors of production. He goes on to discuss the possibility of artificial competition in the producers' market, arriving at the conclusion that this pseudo-competition would finally be rejected in favour of authoritarian planning, which is more fascist than socialist.

After the appearance of Dobb's article, referred to above, Mr. A. P. Lerner[1] felt it necessary to make a reply, the major part of which dealt with the efficacy of free consumers' choice. But he did discuss a few misunderstandings underlying Dickinson's reasoning, one of which is as follows. In computing a consumers' demand schedule in a capitalist society, one assumes all other prices to be constant. But in calculating the proportions of different factors of production to devote to different lines, Dickinson adds together individual demand schedules for different products at various prices, thereby contradicting the assumption. It is as yet impossible to visualize a demand curve for an individual (let alone a group) in which all the possible alternatives

(1) Lerner, A. P., Economic Theory and the Socialist Economy, Review of Economic Studies, vol II, October, 1934

which meet the eye on the market are indicated in order of preference for every possible set of prices.

And thus, to conclude this chapter, one cannot help realizing the enormity of the task facing any economist who attempted to answer the challenge of irrationality that Mises flung in the face of the socialists. It is generally agreed that, although Dickinson did demonstrate, in an imperfect manner, the theoretical possibility of costing in a socialized economy, his proof lacked importance because it was obviously impracticable. The way to apply economic principles to a socialist society and solve satisfactorily the central economic problem was not by means of a system of equations. But although the first attempt was relatively unsuccessful, it paved the way for success in the subsequent debate on the economic efficacy of socialism.

CHAPTER FOUR

THE CONSUMER AND THE MARKET

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One principle mentioned in the last chapter was left for later attention - the principle that the consumer should have free choice on the market. The chief point of criticism in Dobb's reply to Dickinson's article was the latter's assumption that consumers' preferences should be considered sacred. The criticism boils down to a discussion of the efficacy of the market as means for recording and satisfying the demands of individuals. The matter has been discussed at length in various articles by Dobb and Lerner: the essential points in that discussion will be found here. But most of the ideas presented come directly from the pen of Barbara Wootton (1) tempered conservatively by L. M. Fraser. The gist of the argument is as follows:

Economics is very often defined as the science of human behaviour in the distribution of scarce means among alternative uses. There are two distinct divisions to this definition which will be labelled the positive and the normative. The core of the science is the strictly positive study of the allocation of resources to different ends, which in Chapter Two was called the central economic problem. Complete agreement on the results of this study can be reached by all economists despite differing political or ethical convictions.

The normative division is perhaps not so commonly recognized. It is appreciated by realising the implications of the words "human

(1) B. Wootton, Lament for Economics

behaviour". Economics is the study of mankind's efforts to behave economically. Human behaviour must, therefore, be purposive, directed towards a goal, which must be both recognizable and realizable. From this point of view the concept of equilibrium can be defined as the distribution of resources which provides maximum satisfaction in relation to a given system of social or individual ends. It follows that this state is an objective towards which people should direct their efforts.

Part of the economist's job is to show people how to arrive at the above norm of equilibrium. This links the positive division with the normative, for the economist, in order to advise, must know both where to go and how to get there. Barbara Wootton calls the economist's norm "the condition in which equi-marginal returns are realized"(1) which is a rather vague and elusive principle. With a Robinson Crusoe economy, the difficulty is eliminated, for the judgment of comparative utility is made by the only person who is entirely capable of making it - the individual. But when there are several individuals, their ends must be compared, and each will have his own subjective standards. The economist's norm of equilibrium can be applied as a guide to action only when practical measurement and comparison of the importance of ends is feasible. Perhaps also it would not be too strong a statement to suggest that the justification for economics must lie in the ability to measure, for without measurement there is no guidance. The worth of economics will vary directly with the possibility of applying the technical conclusions of the positive division to

(1)ibid, p. 139

assist man in his efforts to behave economically.

To summarize, the economist is an analyzer of, and a guide toward equilibrium. To use the knowledge gained from his first occupation in the course of his second occupation, there must be feasible the manufacture of a reliable machine to reduce the varying aims of a group of individuals to a common denominator in order that they may be measured and compared. The measuring machine in the capitalist economy is the market mechanism. Not only does it measure but it also applies the measure, giving attention only to those ends which exercise a sufficiently strong pull on the market. If this is an efficacious measuring-rod, then the equilibrium established by it will be the desideratum, the economist's norm. The degree of economy in a certain market action will be an accurate estimate only insofar as the market measuring-rod is efficient.

It is only natural that the above train of thought should be pushed into the background in English-speaking countries today where economics means, to most, the study of human behaviour in a market economy based on the fundamental tenets of freedom of contract and private property. The interesting complications offered by the market mechanism have caused positive development in economic science to be concentrated on market operations. Mrs. Wootton suggests that this concentration has given economists a subconscious vested interest in the market mechanism, rendering economics merely a system of apologetics for the kind of world in which most of them live. If they support the market economy, then they believe the market mechanism is an efficient measure of competing ends and that market equilibrium is identical with the ideal equilibrium which is the economic norm. Mrs. Wootton's opinion is that most contemporary economists adopt this position. She refers specifically to Mises and his claim that the market economy is the only rational economy, and to Robbins and his inferences from "Economic Planning and International Order", that to interfere with market equilibrium is tantamount to distorting the distribution of resources from its best position. Her contention is that contemporary economic philosophy contains a belief in the optimality of the market mechanism.

Mr. Fraser (1) challenged this claim in the following manner. He agreed that economic theory (and particularly the theory of value) is both normative and positive. By its use, therefore, economists are rendered competent to state that the position of competitive equilibrium is better than the position of competitive disequilibrium. They do not suggest necessarily that competitive equilibrium achieves the best possible distribution of resources, but only that it does so for the present individualistic framework of opportunity and taste, and of equipment and property distribution. If this capitalist framework is not the best, then the position of competitive equilibrium cannot be considered <u>optimum optimorum</u>. Mr. Fraser claims that the economist realizes this, but considers it his duty to advocate competitive equilibrium as the proper goal of economic policy within the present framework. Only a small group can be found who use the positive value analysis as a prop for capitalism. Mrs.

(1)L. M. Fraser, Economists and Their Critics, Economic Journal, vol. Xlvlll, 1938, p. 199

Wootton can safely be considered unfair, or at any rate overhasty, in her branding of economics as a defense of, or an apology for capitalism. But at a time when authoritarian manipulation is replacing market objectivity in nearly every phase of economic life, an investigation of the market mechanism is appropos.

Mrs. Wootton takes for granted that the market equilibrium is the desired norm, and arrives at some rather strange conclusions not because of the method with which the market worked things out, but because the method was being applied to facts and conditions which contradict the assumptions necessary to render the competitive equilibrium desirable,-viz. perfect competition and mobility. Even the most perfect arithmetic, used on data, which is assumed to be excluded from the problem in hand, is bound to give an inaccurate result. One amazing conclusion of the logic of the norm of market equilibrium is that to destroy commodities is not to destroy wealth when the destroyers are motivated by the normal incentives of the market. Thus when coffee was dumped into a Brazilian harbour during the depression in a futile attempt to raise price by diminishing supply, the action was sanctioned despite the millions who were going without coffee. Another relates to the position of the unemployed person receiving relief. The contribution of the unemployed to the sum total of wealth, according to the market, is nil. Therefore, to provide such a person with relief is to diminish the national wealth. The conclusion would follow as above that the best thing to do with an unemployed person is, as with the coffee to dump him into the sea. According to Mrs. Wootton, the illogicality of these illustrations arises from the presence of non-competive elements in the market.

And one might go further to ask a quite reasonable question: "Cannot the market mechanism be used as a system of measurement in the fields at present controlled by the government? Why not make education, health, and national defence compete on the market with other commodities rather than be subsidized by government interference with normal processes?" It is true that the separate commodities required by these ends can be produced by competing firms e.g. books, antiseptics, and armaments. But the ends themselves - the desire of society for security and protection from disease and external aggression - cannot be secured by individual action. They are an expression of a social choice which cannot originate in the market. The jurisdiction of supply and demand would doom such non-commercial public services.

Mrs. Wootton suggests that these ridiculous results occur in the main because of one basic fault in the market - the absence of perfect competition. If normative significance is to be ascribed to the judgments of the market, that market itself must be perfectly competitive. The chances of this being realized in practice are not very great, for the advantages of combination are of quite obvious and frequent occurrence. To have complete faith in the market, one must believe, evidence to the contrary, that the actual contemporary trend toward monopoly will be reversed. This is as untenable a position as the other implications of endorsing the normative merits of the market, viz. that the individual knows what gives him the most satisfaction, that all satisfaction-giving forms are offered on the market, and that the satisfaction one gets from the right to choose for himself will more than balance the satisfaction he loses from choosing incorrectly.

The list of market defects is a long one. In the first place there are too many alternatives offered on the market. To make a wise choice from among all products up for sale would require far more technical knowledge than it is possible for most to possess. And although, in some cases, one is offered a free trial before purchase, usually one cannot know beforehand how correct his choice is going to be. But if, on the one hand, the consumer has trouble choosing from the goods on the market, remember, on the other, in addition, the consumer's choice is as a rule absolutely limited to things on sale, and among things on sale to those of which they can obtain information through the market. Truly the job of distribution requires a highly intridate mechanism.

It has been mentioned above that if left alone the market would fail to provide many important services necessary for the kind of social environment which is desired. The shortsightedness of individual choice will inevitably collide with the far-reaching but perhaps dimmer prospects of social satisfaction. Moreover, there are many items that the capitalist market leaves to individual decision which in their utilization will provide satisfaction for large groups none of whom will have contributed directly to their purchase. For example, there are offered such items as fire extinguishers, car silencers, and pretty houses, which one purchases and many appreciate. And other items of social benefit are impossible to evaluate, like lighthouses or armament plants. It is not that people do not want things like these, but rather that there is no suitable and efficient medium of expression for their demand. Also lacking is an arrangement for the expression of negative preferences. For example, those who would wish, for some moral reason, perhaps, to prevent the performance of a moving picture at the local theatre cannot express this by paying money into a negative box-office. Nor can there be included in market valuations the varying disutilities suffered by those who are affected adversely by social conditions. Many are the unpaid costs in the present economy. For example, such relevant items of social benefit as natural and archtectural heritage are sacrificed by the erection of ugly houses without opportunity on the market for the sufferers to object. In the free market, the individual's choice is confined to the mere acceptance or rejection of certain proffered alternatives.

Marshall advanced another important objection[(1)] to the superiority of the market as a determinant of economic value. He opined that market equilibrium could be coincident with maximum social satisfaction only when the same amount of money means the same for everybody. He thus appears to imply that the index of satisfaction is reliable only upon an assumption of equality of of income. A scientific comparison of the magnitudes of satisfaction

(1) A. Marshall, Principles of Economics (6th edition) p. 470

of the same good to two individuals is practically impossible when one has an income double that of the other. But a dollar is a dollar and will purchase the same commodity on the market for Rockefeller and a wretch on relief (and the bias is in favour of Rockefeller, in that he will probably possess better information and intelligence by which to guide his choice)[1]. To construct an analogy, a free market whose participators have unequal purchasing power is like a democratic election in which some voters have plural votes. But a society depending on the profit motive to regulate the distribution of its resources cannot cancel the profits for equality's sake and expect the economic system to carry on. Even though this system may provide many opportunities for the economist to manipulate hypotheses in harmonious intellectual patterns, its claims to be an optimum will depend only on its powers correctly to interpret and to satisfy the consumer's wants.

Dr. Dobb objected strongly to the capitalist market on the grounds that the public was prey to the machinations of the advertiser. As he said: "The masses have dangled before their eyes the illusion of free choice, freedom to have what they want if they had the money to pay for it, and are then handed over to the rack devised for them by the advertising agent, the commercial

(1) Marshall, throughout his work, assumed desire to be identical with satisfaction for the consumer, i.e. he assumed that the consumer was a wise judge of what he wanted making no mistakes in his efforts to achieve maximum utility from his income. Marshall says that for reasons of practical convenience he will "fall back on the measurement which economics supplies of the motive or moving force to action; and to make it serve, with all its faults, both for the desires which prompt activities and for the satisfactions which result from them." - ibid, pp. 92-93

salesman, and the social conventions of the ruling class."[1] And he continues to assert flatly that the advertising racket and social pressure are manifestations of rank authoritarianism. Unfortunately, his conclusion is that, on such grounds, the market should be abolished in favour of some other method of distribution. As A. P. Lerner pointed out, his reasoning is rather faulty. Just because the advertiser damages the validity of the popular verdict, Dr. Dobb suggests that to obviate the difficulty an alternative should be found to the popular verdict rather than a check be imposed on the advertiser.

But there is more to be said against the advertiser than merely that he convinces people to change their minds. At present the consumer is paying for a vast amount of competitive advertising, the only certain result of which is a complex differentiation of product, creating varieties and variations _ad infinitum et ad nauseam._ Chamberlin has taught the lesson well that advertising normally means a smaller output and a higher price for every commodity than would be the case without advertising. The only obvious point in its favour is that it provides for individual niceties of adjustment in the products offered the consumer. Therefore, insofar as it appears to be an inevitable part of the market mechanism, the anti-social characteristics of advertising make it one point against the belief that market equilibrium is the desired norm.

In summing up the case against the market as an interpreter

(1) M. Dobb, A Reply, Review of Economic Studies, Vol ii, p. 144, February, 1935

of social desires, Barbara Wootton gives one answer that an economic individualist can offer to anti-market arguments. He can take the stand that the market is a better guide to the solution of practical problems than any practicable alternative so far advanced. Or else he might say that a better alternative insofar as the production and distribution of commodities is concerned, can be provided only at the expense of some important intangibles like freedom. Nevertheless, it is Mrs. Wootton's opinion that because of the evident poverty in the midst of plenty, there must be some preferable alternative to the capitalist market economy.

For the purpose of examining socialism as a possible alternative, Mrs. Wootton set up an imaginary socialist state in which there still existed a free consumers' market alongside completely government-owned factors of production. An initial opinion might be that this free market would inherit the same defects under socialism as under capitalism. But closer examination will probably change this opinion, because socialism is a cure for several of the inconsistencies that are part of the capitalist market. In the first place there is no incentive towards combination against the consumer. Competition will liquidate itself into monopoly only when capital is privately owned and there are pockets waiting to be lined with monopoly gains. In the second place, differences in income would be smaller because inequalities of wealth stem mainly from the amount of property owned rather than from relative earning power. This completes Mrs. Wootton's contribution to the subject of the moment.

Of course one cannot implicitly rely on the market mechanism even in a socialist economy. The best to hope is that the theoretically possible number of complications in market processes may be reduced, with policies conforming to a prescribed pattern. And although not endorsing market equilibrium, even under socialism, as an optimum, it seems reasonable to suppose that market demand will offer a more reliable allocatory guide in a socialist economy than in one of private ownership.

Expression of dissatisfaction with a market process is not answering the problem. There must be some machine to price goods and lead them to their proper destinations. Trotsky put the point in an excellent fashion in the following quotation: "If there existed the universal mind....that would register simultaneously all the processes of nature and society, that could measure the dynamics of their motion, that could forecast the results of their interactions, such a mind, of course, could *a priori* draw up a faultless and an exhaustive economic plan."(1) With no such mind at their disposal, the rulers of the country should allow themselves to be controlled by the consumers' market in constructing economic judgments. Any individual should have what he prefers, whenever it makes no difference to what other individuals can have. This desideratum can be approached only by a free market in consumption goods.

(1) L. Trotsky, Soviet Economy in Danger, pp. 29-30

A. P. Lerner (1) heartily concurred in these views, but his stand was opposed by Dr. Dobb (2) who evidently believes that it is inadvisable to give people what they want. It is true he attacked the assumption that the people know what will give them the most satisfaction, but he replaced it with another assumption - that somebody else knows better than them, what is really good for them. This is a totalitarian approach, happily discarded later. There is no justification for usurping the individual's freedom to choose his own way of life. Lerner condemns roundly those who use as the basis for such an argument "minor variants of the ancient plea of apologetic tyrants' Its for their own good.'" (3)

The attempt in the above discourse was not to demonstrate that things will have to be left pretty much as they are now. Although Dr. Dobb has since changed his dictatorial ideas (vide his "Political Economy and Capitalism") by admitting that the consumers' market provides the best known basis for valuing goods, he goes on to suggest that it might be modified and even supplanted partially by other measuring machines. Much can still be done by consumers' cooperatives, and by the issuance of questionnaires. Every effort should be put forward to utilize all the distributive inventiveness at society's disposal, to find what the consumer really wants, to give him greater initiative, to make him a director rather than a follower of the market. Perhaps socialism will be able to do more along these

(1) A. P. Lerner, Economic Theory and Socialist Economy Review of Economic Studies, Vol ii, p. 51, Oct. 1934
(2) M. Dobb, op. cit.
(3) A. P. Lerner, A Rejoinder, Review of Economic Studies, Vol ii p. 152, Feb., 1935

lines than capitalism has done.

And so, in conclusion, the agreement is fairly general, following from the fundamental right of precedence of democracy over authoritarianism, that to function in the best interests of society, a socialist economy must have a free market for consumption goods.

CHAPTER FIVE

TRIAL AND ERROR

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This is the most important chapter in the thesis. It deserves the superlative because it deals with the most important essay yet to appear in the field of socialist economic theory. This essay,[1] written by Dr. Oskar Lange, appeared first in the "Review of Economic Studies". It has since been revised and published in book form[2] in company with an essay by the late F. M. Taylor, the subject being introduced and summarized for the layman by Benjamin Lippincott. The book is, per se, a comprehensive answer to the problem first formulated by Pierson, and then publicized by Mises. It has the same purpose as Dickinson's essay but formulates a much more adequate theory. Naturally, as in any work dealing with such a broad subject, there have been errors and omissions, but the essence of Lange's argument defies contradiction. This will become more evident in the subsequent exposition.

Before tackling Lange's solution of the socialist problem of rational allocation, it would seem wise to pick up the loose threads in the argument up to this point. In the beginning, an answer was sought to the question: "Is socialism workable from an economic angle?" Lange resolves this into two component parts, viz. (1) Will there be free consumers' choice and, if so, (2) what will be the allocation of resources to satisfy their

(1) O. Lange, On the Economic Theory of Socialism
Part 1 - Review of Economic Studies vol iv, p. 53, October 1936
Part 2 - Review of Economic Studies vol iv, p. 123, February 1937

(2) O. Lange and F. M. Taylor, On the Economic Theory of Socialism (ed. Lippincott)

preferences.[1] If the answer to the first question is in the affirmative, then the consumers' preferences, as expressed by their demand-prices, must be the guiding criteria of production, and thus ultimately of the allocation of resources.

As was explained in Chapter Two, to make the best use of the available resources economic calculation is indispensable. For this there must be some system or method of evaluation. Ludwig von Mises thought he proved this impossible by a series of supposedly logical statements. He said that public ownership meant no factor market,[2] no factor market meant no prices, and no prices meant no rational calculation. Lange introduces his essay by demonstrating the fallacious nature of the logic herein applied. Though agreeing with the first and last of these statements, he attacks the second as involving a narrow meaning of the word "price". Lange distinguishes two definitions of price. The first is: price is the exchange-ratio of two commodities on a market; following this definition, Mises' logic would be sustained. But Lange follows Wicksteed in defining price in the wider sense: "The terms on which alternatives are offered".[3] Only in this sense are prices indispensable to economic calculation.

(1) This seems to be sidestepping the issue of whether it is socially desirable to have a free market. Later on in his essay, Lange explains the working of his system even where there is no such consumers' expression of preference. But nevertheless he neglects the issue dealt with in Chapter Four.

(2) The term "factor market" applies to the system of exchanges between producers who compete for commonly desired factors of production, and the owners of these factors. Socialism, meaning as it does the public ownership of all productive resources, puts the government in the dual role of sole seller and purchaser, thus eliminating the market.

(3) Ibid, p. 60

To allocate resources in the optimum economic manner, Lange states that three classes of information must be possessed. In the first place there must be some sort of a preference scale for finished products; with consumer sovereignty, this is given by individual demand schedules. Secondly, one must know "the terms on which alternatives are offered". And lastly, one must know the amount of resources available for production; the answer to this will be supplied by the technician rather than the economist. Or, speaking broadly, to allocate resources properly, one must know demand, prices, and supply. It was Mises' opinion that the second of these was unobtainable without a market. Lange claims, nevertheless, that the ultimate nature of price is determined, both in capitalism and in socialism, by the possibilities of transforming one commodity into another. Despite the lack of objective market ratios, the socialist entrepreneurs can set up accounting prices which will be as significant and pertinent in their function as signposts, as the eliminated market prices of the capitalist.

As was mentioned previously, Enrico Barone had given a mathematical demonstration that it was possible to make a rational allocation of resources in a socialist economy, despite the lack of factor markets. And in continuing the anti-socialist campaign, both Robbins and Hayek had been forced to admit this theoretical possibility, thus destroying Mises' stand that it was logically contradictory to have a rational process in a socialist state. They retreated to firmer ground by claiming that such a solution as Barone put forward was impracticable in the real world, because of the millions of equations involved. It was their idea that the factor market provided the only practicable method of allocating resources by trial and error.(1) In other words, the factor market was a yardstick of the various alternatives offered, and an automatic corrective for faulty measurements, without which the socialist economy would fail to function.

In Barone's essay, he indicated that a socialist economy, too, must solve the allocation problem by trial and error, but he failed to indicate how. This omission was rectified by Professor F. M. Taylor in an essay entitled "The Guidance of Production in the Socialist State"(2) Without going into particulars, for the matter will be more fully discussed a little later, it is sufficient here to say that Taylor expounded a sound economic system without a factor market. With demand determined by the consumers' and supply fixed de natura, the price should be such to equate supply and demand. Affix a provisional valuation to a commodity, to use in accounting, and adjust it for discrepancies between supply and demand. Thus approach the correct valuation by successive trials, with the limiting position being economic equilibrium. With this explanation, Taylor answers the assertion of impracticability foisted upon socialism by Hayek and Robbins.(3)

(1) The principle of the trial and error method in the determination of competitive equilibrium will be explained later in the chapter.

(2) F. M. Taylor, The Guidance of Production in a Socialist State, American Economic Review, vol xix, No. 1, March, 1929.

(3) It is interesting in its illogicality to note that Mises' accusation of 1920 had been substantially answered for him by Barone twelve years before, and that the position maintained by Robbins and Hayek in the early thirties was proved untenable by Taylor in 1929.

With this recapitulation completed, Lange's work in the field will be more readily understood. His presentation will be followed throughout the remainder of this chapter. His section entitled "The General Applicability of the Trial and Error Method" (1) will be omitted because he discusses in it allocation by trial and error without freedom of choice of consumption and occupation. The inadvisability of such a system was explained in the last chapter, and it is felt that such an omission will not detract from the completeness of the present argument.

In the words of Lange, his purpose is "to elucidate the ways in which the allocation of resources is effected by trial and error on a competitive market, and to find out whether a similar trial and error procedure is not possible in a socialist economy". (2) His first step, therefore, is a review of the determination of equilibrium on the competitive market. He apologizes unnecessarily for "this text-book exposition" because it was the failure to grasp the essential elements of the competitive theory which led economists to dub rational economy impossible without private ownership.

The assumptions underlying a competitive market are two: (1) there are a sufficient number of competing producers and consumers that the influence of any one is negligible; (2) there is freedom of movement throughout industry. To attain equilibrium on such a market, two conditions must be fulfilled, which Lange calls the subjective, and the objective. The first

(1) O. Lange, lib. cit. p. 90
(2) ibid, p. 65

is that all individuals act to maximize profits on the basis of a set of equilibrium prices. The second is that these prices should be such that the demand for each commodity equals its supply. An analysis of these conditions should give a theoretical solution to the problem of competitive equilibrium.

The position of the consumer in fulfilling the subjective condition of equilibrium is one of maximizing the potential utility of his income. He will adjust his spending so that the last cent he spends on each product will bring the same amount of satisfaction. In such a position, no change can be made of direction or amount of spending without diminishing the total utility.[1] And this will determine the demand element of equilibrium.

The producers, on the other hand, will maximize their profit. In order to do this they will minimize their costs by arranging the factors so that none will give a greater increase in the resultant product by being used in a different place or to a different degree. This will be the combination for minimum cost, and can be calculated for different sized plants, the economies of large scale production making the resultant minimum cost, curve concave upwards, each point on the curve showing the least cost (and therefore the most efficient arrangement) for the required amount. The scale of output will be increased to the point where any increase will cost more than the amount for

(1) As Barbara Wootton pointed out, the principle of equimarginal returns, in economic language, merely means, in the tongue of the layman that "the job is prefectly done when it cannot be done any better"[1] Or as Professor Lionel Robbins once remarked:"Equilibrium is just equilibrium."

(1) B. Wootton, op. cit. p. 139

which the resultant increase in product will sell, i.e. where marginal revenue equals marginal cost. This will determine the supply element of equilibrium, and at the same time express the producers' demand for ultimate productive resources.

Prices for these resources will be such as to equate their supply (which in Lange's opinion, will be constant, or at worst a function of their price) with this demand. Since there is freedom of movement between industries, the total output of the industry will be such that the average cost per unit of output will be equal to the price of the product. (At the point of competitive equilibrium it will be remembered that the marginal revenue equals the marginal cost equals the average cost.) The above equation is the result of all individuals maximizing their profit. And that is the subjective condition of equilibrium.

The problem of satisfying the objective condition of equilibrium is the selection of that set of prices from the demand and supply schedules which renders the subjective maximum positions of all individuals entirely compatible. In other words the demand and supply of each commodity have to be equal.(1) One set of prices, obviously called equilibrium prices, will equate demand and supply. And this will be the theoretical solution of the problem of equilibrium in the competitive market.

(1) Although Lange is presenting a purely theoretical solution here, nevertheless he should use data that are at least conceivably measurable. On page 69, he says "By assuming different sets of prices, we obtain the demand and supply schedules". As was pointed out in criticizing Dickinson's solution, a demand schedule is constructed on the assumption that prices of all other commodities remain constant. Where all prices are being juggled at once, the construction of a schedule becomes a practical impossibility. The point is not important to his argument, but appears to be another example of using impracticable statements, excused by labelling them theoretical.

Lange proceeds to show how the problem is actually solved by trial and error. The solution derives from the assumption of competitive shortsightedness, or, as Lange calls it, the parametric function of prices. The essence of this is that every competitor in the field regards the prices as fixed and unaffected by any action he may take. At the same time these prices will move under the impulse of the large group of competitors, all behaving in the manner referred to. Thus prices determine individual behaviour, which determines prices (by its collective force) and so on.(1) Equilibrium prices are approached, as Walras demonstrated in "Elements d'economie politique pure", by a series of trials, each succeeding one generated by the error of that immediately before it. Suppose any set of prices are selected at random. The individual producers and consumers will maximize their position, thus fulfilling the subjective equilibrium condition. This will establish demand and supply. Any divergence between these two will bring the objective condition into play, raising price where demand is greater than supply and vice versa, by the competition of buyers and sellers. And so a new set of prices will be established which will remain only if they satisfy the condition of the equation of demand and supply. And thus equilibrium will be achieved.

The answer to whether a similar method can be successful in a socialist economy will be determined by a like analysis. It

(1) This is akin to the situation depicted by Chamberlin (pp.90-91 Theory of Monopolistic Competition) in which the shortsighted seller saw the situation as fixed despite his actions, whereas the situation changed simply as a result of his and other resultant actions.

will be recalled, in swinging away from the familiar competitive arrangement, that the one essential respect in which the socialist state differs from the capitalist is that the government owns all productive resources. Just as before, according to Lange, equilibrium will be determined by two conditions, the subjective and the objective.(1) The objective condition is the same as with capitalism, i.e. prices (but now of both the market and accounting varieties) are such to equate demand and supply. The subjective condition is that, on the basis of these prices, individuals (in three senses: as consumers, as sellers of their own labour, and as managers of production) will operate according to certain principles, which will be explained presently.

But first, there is a question about the "objective" condition of equilibrium in a socialist economy. Perhaps there will be some dispute as to whether the word "objective" is being used correctly because any accounting prices, where the goods to be measured do not enter the market process, will be arbitrary and thus lacking in objectivity. In this connection Lange states correctly that the objective price structure exists in a competitive market because there is only one set of prices which equalizes the demand and supply of each commodity, and this position is a result of the parametric function of prices. This latter is automatic on a competitive market because of the large number of competitors, but it will be just as effective if enforced as a rule of direction of the production managers. Thus all managers

(1)Lange's procedure of taking the subjective condition before the objective proved confusing. Therefore here will be followed the reverse arrangement, with the hope that the horse may now be in its proper relative position with respect to the cart.

must treat prices as constant for purposes of accounting. And this renders the structure of equilibrium prices determinate, as the one at which the same amount of each commodity is demanded and supplied. Errors in this structure will be revealed by surpluses or shortages of the commodity in question, i.e. mistakes will be revealed in a very objective manner.

Coming to the subjective equilibrium condition, the first part will be the same. Consumer sovereignty in expressing preferences will determine demand. But managers will not attempt to maximize profit. Instead, they will be guided by certain accounting rules, following the aforementioned principles laid down by the Central Planning Board. In the first place the factors must still be combined in the most efficient manner, to minimize the costs of production. This means, as before, combining the factors in such a proportion that the marginal productivities of each factor of the same value will be equal. Economic terminology makes this seem more difficult than it really is. The rule simply says: of two ways to make the same product, choose the cheapest. To fulfil the function performed in the competitive system by the producer trying to maximize his profit, the Central Planning Board must order managers of a whole industry to expand or contract the industry to the point where marginal cost equals price. In this capacity, the rule takes the place of the free movement of firms between industries in perfect competition.

To repeat the rules: (1) Combine the factors of production to minimize average cost; (2) Produce to the point where marginal cost equals price. These rules differ from those laid down by Lange in the first publication of his essay in the "Review of Economic Studies". But constructive criticism by A. P. Lerner in "A Note on Socialist Economics", (1) corrected Lange's error of saying that the second rule should be to equate average cost and market price. The reason for Lange's mistake was that he was attempting to reproduce static competitive equilibrium, in which average cost equals marginal cost. Suppose, for example, there is an excess of fixed equipment in a plant so that the marginal cost is less that the average cost. To restrict production to the point where price equals average cost instead of to the point where price equals marginal cost, is merely to maintain unused excess capital values. (2)

Another point mentioned by Lange, is the divergence of results in socialism and capitalism. To follow the rule that an industry should produce to the point where price equals marginal cost will give the same result as obtained under free competition only in the case of constant cost to an industry (where marginal cost is equal to average cost) because in all other cases (of increasing or decreasing cost) the marginal cost is not equal to the average cost. The latter firms will make profits where the marginal cost is greater than the average cost, and losses where marginal cost is less than average cost.

Returning to our subjective condition, one element remains. The owners of the ultimate factors will sell these to the highest bidder, just as they did in capitalism. The Central Planning

(1) A. P. Lerner, A Note on Socialist Economics, Review of Economic Studies, vol iv p. 72, Oct. 1936

(2) It is intended to leave this discussion incomplete in its dynamic aspects, for they will be more fully related in the next chapter.

Board will fix prices on capital and natural resources, and these will go only to industries which can afford this price.

This concludes our theoretical treatment except for two points, on each of which Lange had to be corrected by Lerner. The first was in connection with the distribution of the social dividend, the profits of production which accrue to the state from ownership of all productive resources except labour. Lange said first that the dividend should be distributed in proportion to the wage rate, believing that in that way it would not interfere with the ideal distribution of labour between different occupations. But, as Lerner remarked (and Lange agreed) this will tend merely to attract too many to the jobs with high wages. The conclusion is that, whatever principle of distribution is adopted, it must have no connection with the wage rate of different occupations.

The second point deals with the determination of the rate of interest. Lange says that for a short period solution, the rate will be such that the supply of capital will meet the demand, because in the short run the amount of capital can be regarded as constant.(1) But in the long-term solution the Central Planning Board will determine the rate or speed of accumulation by arbitrary adjustment of the rate of interest. Of all features of socialism, Lange is displeased most with this.

Finally, as to the practical mechanism by which equilibrium is determined in socialism, Lange repeats his procedure with the

(1) Lerner points out in "Note" that this is an invalid assumption because there is always a varying flow of free capital being invested, and investment involves more capital than is necessary to maintain the present demand. But the long-term analysis which follows will hold for the short-term too.

competitive analysis, and examines the actual method of trial and error by which equilibrium is approached. The parametric function of prices will operate here not by instinct but by command. The Central Planning Board will fix a set of prices at random, (Historically given prices can be used as a basis for these) (1) and order the managers of plants and industries to produce by their accounting rules on the basis of these fixed prices, thus determining the supply. The free consumers' market determines the demand. Only the equilibrium price will make supply equal to demand. Too high a valuation of a factor will be indicated by a surplus of that factor resulting from over-economy on the part of the manager using that factor and vice versa. Thus will be indicated at least the direction in which to change prices to approach equilibrium.

And this seems to be a sufficient demonstration of the practicability of the trial and error method as a device for objectively determining equilibrium prices in a socialist economy. To Hayek and Robbins, who pointed out that millions of equations would have to be solved for an approximation akin to the competitive solution, Lange replies in these terms: Consumers will be left to spend their incomes in the way that they think will give them maximum total utility, as before; managers of production will combine factors to equalize marginal cost and the price of the product by making (either actually, or in their

(1) Hayek points out a fallacy in this position in "Collectivist Economic Planning". For a socialist government to think they can start from the status quo and adapt their economy to minor changes from day to day by trial and error, requires an assumption that changes in relative values due to the transition from capitalism to socialism are small enough to use the status quo instead of a complete re-arrangement. This Hayek calls an unwarranted assumption.

imagination) small variations at the margin, and observing the effects of these on costs and product, thus performing much the same function of allocation as the capitalist entrepreneur does in maximizing his profits. And to establish the prices for these managers to use in accounting will require only a watch for surplus or shortage to indicate discrepancies between demand and supply. Here then is no multiplicity of equations, but just about the same situation as in a capitalist economy.

The argument up to this point has been written to demonstrate that the planned socialist economy will have the same formal principles of allocation as the competitive capitalist economy. Why then should there be a change? If a new tire is going to be so much like the old one, why not just put a patch on the old one, instead of going to all the trouble of changing the tire. The answer is that socialism will actually allocate resources in a quite different fashion owing to two distinguishing features.(1) The first is that the distribution of income is more likely to attain maximum social welfare. In capitalism, there is great inequality of income, because ownership of land and capital, which is the strongest element in income determination, is so unequally distributed. As was related in Chapter Four, the demand price does not reflect the relative ugency of the needs of different persons, when these have different incomes. Therefore an allocation directed by this demand will not attain maximum social welfare. And the same point arises, as in Dickinson's solution, that correct distribution of labour demands

(1) This is not intended as a complete discussion of the economic pros and cons but merely a summary of the arguments that Lange presented.

wage differentiation. The answer remains the same: differences in income, when returns from land and capital are eliminated, will be fluctuations about a mean.

In the second place, Lange believes that the entrepreneur in a socialist economy will be more liable to take into account all items which should enter into an adequate costing scheme than a capitalist entrepreneur, presumably because the latter generally aims only at maximization of personal profit, and will therefore budget only for items for which he must pay a price. But the social cost of production, which does not enter the ledger of a capitalist, will become very important to the Central Planning Board, because it concerns such ends as it is the aim of an ideal socialist government to further. Security, health and even life are sacrificed by capitalist decisions not because of direct intention, but just because of insufficient knowledge of the results of the decision, and insufficient awareness of the responsibility inherent in the decision-maker. But the keynote of socialist accounting will be its comprehensiveness, its inclusion of all the alternatives to be realized or sacrificed when a managerial choice is made. And this is important not only in the interests of society but also in the interests of efficiency. The Central Planning Board will be able to observe the mechanics of the system through the glass walls of every industry, and every factory, and will be able to curb the business cycle. Not that mistakes will not be present, but in correcting these, no resultant error in some other phase need occur as is the case now when so many capitalists make ostrich-like decisions and cause cumulative shrinking in both demand and supply. In other words, a more comprehensive accounting scheme will enable the Board to localize mistakes.

Lange concludes therefore that socialism is economically superior to capitalism: (1) because the distribution of income will more likely be such as to maximize social welfare and (2) because all alternatives will be taken into account. He makes the extravagant claim therefrom that the achievements that many economists expect from free competition can be found only in socialism, because the inherent tendency in the capitalist state is for free competition to degenerate into anti-social monopolistic competition. The only drawback that he sees in the socialist economy is the arbitrary nature of determining the rate of capital accumulation. This matter will be discussed in Chapter Seven.

Although it is doubtful whether this point should be included in this thesis, for it does not deal with the economics of socialism but rather with the capitalist system, Lange saw fit to present a convincing remonstration of the existence of an inescapable capitalist dilemma. As he put it, the capitalist economy has had an amazing career of economic progress, seeking out invention after invention which led to greater efficiency. Necessary to this progress is freedom of competition, as characterized by the parametric function of prices and the free entry of firms into industry. The entrepreneur who discovers an innovation will gain an immediate temporary profit. Less efficient entrepreneurs will be forced by the competitive market to suffer temporary losses - temporary, that is, until they too find ways to cut costs, or else leave the industry to the more efficient. With the gradual change from competition to monopoly there will be a tendency to avoid these innovations, because they almost always bring about a devaluation of the already invested capital. For instance, if there is one type of machine installed in a plant, the superintendent will be loth to order that type replaced by another, even when the new one will be more efficient than the old, for the reason that the cost of the old one cannot just be written off the books in the interests of efficiency. Under competition, there was no alternative; a producer had to be more efficient or he would be forced out; in monopolistic competition, the weapon of monopoly restriction can maintain the value of the old machine. Only when the reduction in cost from the introduction of the innovation balances the loss from amortization will the innovation be introduced. In other words, as Robbins pointed out, economic progress is not compatible with the preservation of value already invested in particular industries.

Lange's summary description of the situation is as follows: "The capitalist system seems to face an unescapable dilemma: holding back technical progress leads, through the exhaustion of profitable investment opportunities to a state of chronic unemployment which can be remedied only by a policy of public investment on an ever-increasing scale, while a continuance of economic progress leads to the instability due to the policy of protecting the value of old investments which has been previously described."(1)

Closer to the present discussion is Lange's discussion of the proper policy of transition from capitalism to socialism. The concensus of opinion, says Lange, is that gradualism would be preferable economically though perhaps not politically. But Lange says that the capitalist system can maintain itself, as well as it is doing now, only so long as its security is not threatened. The inducement to invest and manage efficiently on the part of the capitalist will be removed instantly by any threats or expected threats of expropriation directed their way by the socialist government. He would retaliate with passive resistance and sabotage. To be effective, any policy of repaying the capitalist for his investment would be too costly, for the capitalist cost of appeasement would naturally be a high one. And so Lange believes that any policy such as socialism which aims at a radical change in property relationship must be carried out boldly and at one stroke. He points out that the people must be shown that socialism was not directed against private property as such, but only against that which hindered economic and social progress. This can be done by immediate action in favour of those who will gain the most from a transition from capitalism to socialism, i.e. workers, farmers, and the <u>petit bourgeoisie</u>.(2)

(1) O. Lange, op. cit. p. 116
(2) The policy of the C.C.F. in Canada is to bring about change gradually, attacking in order those industries which seem most to offend society. But. as Mr. David Lewis has pointed out, this policy is not directed towards complete socialization as an end, but as the means to that end. Where economic collapse becomes imminent, methods will be adapted to meet the present situation. D. Lewis' speech at McMaster University, March 2, 1944.

With the above word, Oskar Lange ends his treatise of the economic theory of socialism. The imperfections of his work will be pointed out in the next chapter, which contains amendments and additions to the theory. But it is the most complete answer to all claims of the economic impracticability of socialism. The last chapter of this thesis will attempt to emphasize, as have Lange and many others, that the problem of socialism is political and sociological rather than economic.

CHAPTER SIX

ANTICLIMAX

CHAPTER SIX ANTICLIMAX

Yet another economist became interested in the theoretical efficacy of socialism because of the controversy related in previous chapters. Writing in the Economic Journal, Mr. E. F. M. Durbin cites his purpose thus: "to demonstrate that there are no theoretical or logical difficulties in the use of an accurate pricing system in a planned economy."(1) From the tenor of Durbin's introductory remarks, which review the preceding debates of Hayek and Robbins vs. Dickinson he makes it evident that, although his work was published after the appearance of Lange's first essay in 1936, it was written before that monumental work. And thus, although it must, of necessity, be in the nature of an anticlimax (for Durbin's solution was decidedly inferior to that of Lange) this essay is here reviewed with the hope that it will serve as a guide in avoiding pitfalls. The precedent for this step was set by A. P. Lerner, who was aroused by Durbin to write an exhaustive account(2) illustrating the correct approach to the problem, and using the article by Mr. Durbin as a text on which to base his lesson, because it conveniently summarizes the weaknesses that are common in this field of analysis. The following treatment will follow Durbin's argument with comments chosen from the critique by Lerner.

It is Durbin's intention to present an original socialist solution to the central economic problem of factor allocation, which he calls the problem of "economic calculus". He evidently

(1) E. F. M. Durbin, Economic Calculus in a Planned Economy, Economic Journal, vol xlvi., Dec. 1936, p. 676
(2) A. P. Lerner, Statics and Dynamics in a Socialist Economy, Economic Journal, vol xlvii, June, 1937, p. 253

believes that the perfect answer to the problem is supplied by the competitive equilibrium and therefore examines the approaches to that equilibrium. But Lerner believes that the competitive equilibrium position is desirable only because it satisfies the principle of marginal opportunity cost, and that a more direct method of attack would be by immediate application of that principle. Durbin himself recognizes that following this principle will achieve the desired economic ideal when he states that "the costs of one commodity must be assessed in quantities of sacrificed alternative goods".(1) But he neglects to follow this up in his search, preferring the more roundabout, and (as will later be shown) treacherous path towards competitive equilibrium.

Not being aware of this misplacement of emphasis, Durbin gives three forms of the doctrine that prefect competition secures the optimum distribution of resources for consumer satisfaction.(2) The first is the Marshallian supply and demand analysis. Equilibrium, according to this analysis is a state in which marginal revenue = average revenue = marginal cost = average cost = price. This condition of equality derives from the fact that the product of the individual entrepreneur, because of perfect competition and mobility, has a horizontal demand-curve. The second, entitled the Austrian marginal solution, states that equilibrium is attained when the marginal products of all interchangeable factors in different uses are equal.

(1) E. F. M. Durbin, loc. cit.
(2) The validity of this statement has been questioned in Chapter Four. Durbin likewise expresses doubt as to the doctrine in a footnote.

And the third is the Walrasian general solution by simultaneous equations, which presents a determinate system of equations relating prices and quantities and resolving the problem of rational choice. Durbin asks which of these provides a rule of procedure for the planned economy.

These following remarks, should be considered, however, before examining his answer. The above three forms of the theory of value will differ in their significance to any discussion depending on whether they are required as methods of economic analysis or as techniques of economic administration. Lerner claims that Dickinson's solution failed because of a fundamental confusion between analysis and administration when he applied the Walrasian analysis to socialist problems.

Both Lerner and Durbin dismiss the third, or Walrasian form of the theory of value as an impracticable technique of economic administration. For, if that form is the one which clarifies best the elusive vision of competitive equilibrium, it is just as certainly the one which fails most completely as a practical technique.(1) The practicability of that form is restricted by the limitations of human capacity - only so many facts can be handled simultaneously by the mind of man. Taking this into consideration, Lerner suggests a partial analysis by means of which one situation can be dealt with by itself instead

(1)Mr. Lerner seems unduly harsh in his treatment of Mr. Durbin's theory at this point, because the latter just as heartily condemns the theoretically adequate Walrasian solution on the grounds of impracticability. The moral is an excellent one, bgt surely other economists could be found who deserve more justly the unkind remarks.

of as a member of a complex group of situations. This is satisfied by a marginal approach. Mr. Lerner's discussion of this approach will be considered later.

Following his plan of orderly discussion of the three forms of the theory of value, Durbin criticizes next the second, or marginal method of analysis which says that, if all production units move their resources so that their positions on the margin will be of equal value to the resultant product, then the desideratum will be achieved. The existent social institutions, be they socialist or capitalist, can hardly affect the ability to calculate marginal products. The objection of Durbin is that the solution in either case will be an estimate. This will probably involve errors in two directions: (1) in calculating the physical product resulting from some reorganization of production, and (2) in calculating the demand curve for the product. Any such solution will be only an approximation unless the adjusting process is submitted to some other type of check.(1)

Mr. Durbin suggests that such a check on the second, or marginal, method of analysis can be found by applying the first or Marshallian method of analysis. The second method suggests the following rule which officers of the economic administration must follow: equate marginal revenue and marginal cost, henceforth to be called Rule Two. But this rule will indicate

(1) Lerner agrees that inaccurate solutions will be the result of faulty foresight. He states, therefore, that the only way to remedy this situation is to improve said foresight. Valuable lessons can be learned from past errors as revealed by the deviations of what is from what was expected. But Lerner will not admit of any principles to enhance accuracy which can be substituted for improved foresight.

successful achievement of the desired equilibrium only under the conditions of free competition. Therefore check on the equilibrium of Rule Two by use of the first, or Marshallian analysis, which calls the condition that price should be equated to average cost the typical indication of competitive equilibrium. This latter rule will be referred to as Rule One. The procedure, thus, will be to apply Rule Two, and see if the results check with Rule One. If they do not, then apply Rule One.

Mr. Lerner criticizes this use of the two rules for the following reason. With perfect competition, Rule Two equalizes price and average cost automatically. To replace Rule Two by Rule One when the former fails is merely to substitute one condition of competitive equilibrium for another. And furthermore, the theory of imperfect competition shows that both Rule One and Rule Two can hold for an equilibrium that is not competitive, and therefore not to be desired (at least by Durbin). The conclusion to be drawn from the above dilemma is that these rules merely provide evidence of the existence of conditions of competitive equilibrium and do not necessarily bring about that equilibrium where the objective conditions of perfect competition are absent.

Mr. Lerner, therefore, advocates a direct approach to securing the most economic utilisation of resources. As he correctly remarks, with the parametric function of prices in force, the ratio between the prices of goods on the consumers' market will be the same as the ratio between the marginal significance of the commodities, because the last dollar each individual will spend will go towards buying the commodity which the individual most desires (which is the principle of equimarginal returns again).(1) And this condition, if not fulfilled will be reflected in every stage of production where some choice must be made between substitutable means.

Posing the production problem (which is the function of the consumers' market in demanding certain commodities) does not deserve, however, as much investigation as solving the subsequent allocatory problem (which is the function of the producers' market in deciding how to use to best advantage the primary factors. Lerner asserts that every factor should be used in its position of maximum productivity at the margin. Or, in other words, the use of every factor should be extended up to the point where the price of the product equals the physical quantity of any factor needed to produce another unit of product multiplied by the price of the factor. This value Lerner labels the marginal cost. His rule for optimum use of economic resources (which coincides with Lange's findings) is to equate price and marginal cost.

Mr. Lerner's discussion of the marginal approach will be concluded later. As for Mr. Durbin's approach, perhaps a brief recapitulation is necessary. His aim was to find one of the three forms of the theory of value that would provide the socialist state with the directive toward a position akin to that of competitive equilibrium. He dismissed the Walrasian form as

(1) And once more it might be wise to remind the reader that this assumes that individuals choose best for themselves. Of course the principle will hold whoever is the consumer - even when the state abrogates the sovereignty of the consumer in the interests of society.

expeditiously as did Lerner because it was impracticable as a technique of economic administration. Although he agreed with the idea of a marginal method of analysis, he regarded it as inadequate because of the estimates required, and incomplete therefore without some check. The third step in his examination of the three forms of the theory of value was to discuss applicability of the Marshallian supply and demand analysis to socialist economics.

He thus presents a situation in the completely socialized economy which answers the conditions of a previously outlined competitive equilibrium, where the market prices of the mobile factors will be equal to their marginal products and to each other. If the Central Planning Board wishes to construct a plant to manufacture a new product, it must earn the prevalent rate of profit. The problem is to build a plant of the correct size. Durbin selects as optimum that output which is produced by the plant whose average cost curve is cut at its minimum point by the estimated demand curve. This is the point at which price equals average cost. Given correct calculations, the appropriate plant can be built.

But Durbin reminds the reader that the calculations may have been incorrect in the first place, or perhaps the data have changed in the meanwhile, causing a deviation from what was expected. Under such circumstances the socialized trust will find itself in one of two positions: changes or errors involving too much or too little production. This disequilibrium may be caused by increase or decrease in demand, changes in the prices of substitutable factors, or changes in technical conditions that create obsolescence. For instance, if demand increases, profit will increase and a larger plant should be built increasing production to the point where marginal revenue equals marginal cost (which will be the same point arrived at by Lerner's rule). For a decrease in demand, profits will be below normal. The plant could carry on at the point where marginal revenue equals marginal costs. The other alternative is to produce to the point where price covers marginal cost. This choice arises because of the absence of the necessity to maximize profit. DurbiDurbin and Lerner do not agree on which alternative to choose; the latter naturally favours the second (which is his all-embracing rule). Durbin does not give the rule to equate price and marginal cost fair treatment; he uses it only in the case of falling demand, pointing out that then the marginal cost would be less than the average cost, leading to losses in the long run.(1) Apparently the greatest advantage he sees in the rule that marginal cost should be equated to marginal revenue when demand decreases is greater simplicity. He cites his rules: to produce at lowest total unit cost the largest output that will earn normal profit; if in the short period there is no plant that will earn normal profit, then produce for as big a profit as

(1) Such a situation would arise if a socialist government were to adopt a policy of nationalizing the parts of the economy which were heading for bankruptcy, e.g. C.N.R. This seems, therefore, to be an additional argument for a speedy and complete transition from capitalism to socialism.

possible. i.e. to the point where marginal revenue equals marginal cost. Mr. Lerner points out here that the first rule seems to condemn abnormal profit as an example of monopoly restriction, even though that profit may accrue to the state.(1) In addition, Durbin claims that, in applying his rule, the existence of unused factors of production would serve as an index of the necessity of not replacing them. He admits a weakness in his argument without justifying or excusing it, when he says that following his rule "would mean a continuous wastage of fixed plant in the industries suffering from a decline in demand."(2) This wastage would occur whenever errors or unforeseen changes caused the installation of too many instruments of production. Thus not only does Durbin admit social loss from the mistake, but intimates that society must punish itself further by not using the additional machines at all, thus losing the wrongly invested resources entirely.

Durbin realizes that his selected solution for a decline in demand is a short period one. He says, therefore, that the manager must consider the optimum size for a smaller plant which must be built "in the fullness of time"(3) - a very vague directive

(1) Here would perhaps be the place to point out that the very name "monopoly" has undeservingly become synonymous with "bad". A monopoly, and the powers it possesses from its position, must be judged good or bad on the basis of how it uses that power. A private monopolist who restricts production and holds up price to social disadvantage for his personal gain is bad. But the monopolist who operates in the interests of the state cannot likewise be considered bad merely because of the extra power he wields. It depends on the way he uses that power.

(2) ibid, p. 686

(3) ibid, loc. cit.

for an economist who criticizes the impracticability of other solutions.[(1)] Lerner opines that his rule to equate price and marginal cost is directly applicable; he advises the socialist producer to consider every act of replacement as a marginal item to be calculated whenever the price of the product or service procided (discounted for the lapse of time) is greater than the cost which must be incurred to obtain it. If an oversize plant must be replaced by a more suitable, smaller plant, it will be done gradually in the following manner. Small items which wear out should be replaced because the larger equipment is still of some use - and up to the point where the return to the whole equals the cost of replacing the whole - for more items will have to be replaced as time goes by. At this point the old equipment is sold for scrap. Meanwhile the new plant has been prepared to take over. If some guesswork is involved, that is excusable as being common to all forms of human knowledge. The loss which faulty guesswork entails will, according to Lerner, be more explicit in a socialist society.

It is Mr. Lerner's opinion that, despite its many imperfections, Mr. Durbin's solution provides definite rules to guide the production decisions of the socialist entrepreneur, the following of which will probably allocate resources to better social advantage than at present. But Mr. Lerner's approach is by far the sounder. His simple principle of adjusting output to the point

(1) Lerner calls this phrase "the nearest English expression for the untranslatable word by which the citizens of such countries as Russia or Spain show their refusal to recognize time as an economic factor".[(a)]

(a) Statics and Dynamics, p. 263

where price equals marginal cost can deal with the multitude of situations for which economists deemed it necessary to consider average costs. He calls this "The contribution that pure economic theory has to make to the building up of a socialist economy".(1)

(1)ibid, p. 270

CHAPTER SEVEN

INTEREST AND INVESTMENT

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All that is needed to complete the theoretical treatment of this study is a statement regarding the position of interest and investment in the socialist economy. In Chapter Five, reference was made to Lange's uneasiness about the arbitrary nature of the rate of interest. In brief, his position (as complemented subsequently by Lerner) was as follows. Investment in an industry should be undertaken when the output to result from that investment will meet its cost, including an interest-charge on the capital involved in the work. This would mean, in actual practice, a decentralization of most investment decisions in form and direction, the duty of the Central Planning Board being to determine the total amount of capital to be invested in all industry in a given period, and then to adjust aggregate demand to this amount by appropriate changes in the interest rate.

Lange's treatment of interest has been criticized (1) on several grounds. A first objection is his conception of the demand for capital in terms of the diminishing marginal productivity of a given stock of capital. Thus, the higher the cost of using the capital (i.e. the interest rate), the less capital will be used, and the interest rate is construed as a mechanism capable of controlling the rate of investment. But, in practice, the inducement to invest increases with the rate of investment and a cumulative movement is started which creates

(1) The chief objector was Doctor Maurice Dobb, in an article entitled "A Note on Saving and Investment in a Socialist Economy". Economic Journal, December, 1939, p. 713

its own draught. This could hardly be checked by a trial and error process of searching for an equilibrium price for capital by interest rate adjustment.

A second objection is the inadequate provision for full employment in Lange's decentralized socialism. The rate of investment will determine industrial output and therefore the industrial capacity for employment. One rule has been established for industrial output in the form of an instruction issued by the Central Planning Board to the managers of an industry: produce the output for which price equals marginal cost. In this rule no mention was made of another important consideration which should affect the output - the consideration that full employment should be aimed at. Where the results of following these two rules are divergent, i.e. where the output for price to equal marginal cost is not the output which secures full employment, the universal rule of Lange should be overridden.

The importance of adequate provision for employment in making investment decisions cannot be overstressed. A common result of industrial progress is technological unemployment. It is true that many new jobs are created in time by the changes in demand and method brought about by these advances. But there is no automatic regulator to assure employment for those displaced by the mechanizing of their jobs. The interest rate, i.e. the price that must be paid for the capital required in mechanization, does not reflect the future need also for capital for additional jobs, because displaced workers are no longer cost items in the accounts of the entrepreneur who saw private profit to be gained by a technological improvement.

But with the changeover from the individualist shheme motivated by the stimulus to personal gain, to the socialist scheme controlled by a benevolent authority in the interests of society rather than any one individual, such items as unemployment will most certainly bulk large in the ledger as a cost of progress. Far-sighted regulation of investment will take into account the effects on the future situation of labour and capital of assigning part of the present capital fund to a project. Inquiry will be made into: (1) the time required for construction of new machinery; (2) the time required for the mechanization to diminish the amount of labour required; (3) the number of labourers affected by mechanization. Roughly speaking, the long run investments which are being started during any given period should be distributed equally between projects which increase and projects which diminish the demand for labour. This will require an allowance for the different lengths of time involved in construction in different investments.

Another factor which should enter the long-run investment scheme if at all foreseeable, is the possible change in the number of people capable of employment, as brought about by shifts in the age compesition of population or in the proportion of employables. And thus it can be seen that, although one indispensable condition for investment is effective demand for the final product adequate to cover the cost of the investment, this condition must, on occasion, be modified by negative regulation to prevent investments with injurious future effects.

It has been mentioned before that the individual is not capable of assimilating the data necessary for a comprehensive investment decision. This idea is reiterated here because it is felt that in the field of investment, the socialist has some of the finest economic arguments in his favour. In a capitalist economy there is a constant bias in the mind of the investor in favour of the present as opposed to the future, understandable because of the large element of risk. Many decisions would be changed if the investor could look into the future. For example, consider a man prepared to invest in a home. The present state of his finances leads him to buy a moderately-priced house which may have an expected life of twenty years. But five years later his financial status has increased through unforeseen circumstances, and he finds that he can afford a mansion. He buys it, sacrificing the house which is still good for another fifteen years. If he had had adequate foresight he would have rented a bungalow for five years in the anticipation of being able to purchase a mansion at the end of that period.

Now it would be absurd to suggest that the socialist economy will be possessed of such foresight, but it is reasonable to presume that control over all investment decisions will give the Central Planning Board a better indication of future trends, a better view of what will be. With a more certain future, people will be less biassed towards spending as opposed to saving. Dr. Dobb (1) presented an interesting parable to illustrate the

(1) M. Dobb, Economic Theory and the Problems of a Socialist Economy, Economic Journal December, 1936, p. 597

improvement that a planned future will have over an uncertain one. Suppose a man riding a bicycle is spied by his dog. The dog will run directly toward the master, changing his direction as the bicycle moves ahead. The curve traced out by the dog in reaching the bicycle will be considerably longer than the straight line the dog would have followed had he made allowance for the speed of the bicycle. This analogy is more interesting than it is informative, but perhaps it will be helpful toward an understanding of the proper relation between the present and the future which is involved in every investment decision. A socialist long-range plan can minimize by its very nature the factors of uncertainty and risk, changing surprise into anticipation. Partial errors are still possible in socialism even with long-term investment, but these might be isolated or cured without the dangerous cumulative effects which are so common in the capitalist economy.

The above remarks,are, after all, only generalizations. What is to be said about the specific organization of planned investment? The essence of Lange's plan was a decentralized system operating under the guidance of an accounting price and an interest rate. Investment was undertaken by rule-of-thumb response to accounting prices from industrial managers equipped with blinkers. But they, in turn, would be at almost the same disadvantage as their capitalist brothers in not possessing all the relevant data.(1) Dr. Dobb suggests

(1)Dr. Dobb apparently does not believe in the practicability of an economy with glass walls, as suggested by Dickinson. He suggests that the socialist manager would have to guess the reaction of other managers to trends of investment, setting up a parametric situation in which his and their decisions, based on estimates of the trend would all affect the trend. But cooperation in place of competition, and publication of industrial accounts and decisions, would give these estimates a high degree of accuracy.

therefore, that the general outline of all investment decisions should be centralized. The Central Planning Board, in deciding how much of the community's resources to invest, would consider comparative productivities of these resources as reported to them by each industry. Resources would be used where the marginal productivity in terms of final output is estimated to be a maximum, applying this rule directly rather than through the mediation of some accounting price for capital.(1)

Thus each industrial management would submit drafts of proposed plans, using as a basis for the construction of these, an accounting price, as a feeler, but not as an automatic regulator of the actual decisions. Then the Central Planning Board should express all projects in terms of a ratio between their net productivity and their cost. All resources would then be allocated by moving down the priority list. The only question to be left to the individual entrepreneur would be that of obtaining maximum efficiency in running the plant whose nature and output will be given to him by the Central Planning Board. The increased centralization might be dangerous sociologically and politically (as is evident in the bureaucratic problems in United States today) but from the standpoint of economics, Dr. Dobb's suggestion appears to fill the bill.

(1)This holds, of course, where the significant consideration is the comparative productivity of economic resources. Where items such as employment (discussed above) are affected, these must take precedence over productivity or at least be calculated as an important cost of the proposed move.

CHAPTER EIGHT

THE LAST WORD

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The time has come to arrive at some conclusions. The theoretical presentation is as complete as present purposes demand, and if there is an answer to the question of the soundness and practicability of socialism, from the standpoint of economic theory, then that answer should be formulated here and now. But, first, brief consideration must be given to certain phases of the question which might almost be classed as meta-economical, lying both within and yet beyond the scope of economics, and therefore neglected in theoretical and practical discussions alike. These phases are the most dangerous to discuss dispassionately for they are, de natura, inclined to be subjective opinions rather than objective abstractions. Therefore the discussion will be a short one on the understanding that its incompleteness follows from its controversial nature rather than from its relative unimportance.

It is generally considered a valid argument against socialism that industrial progress will suffer with the removing of the institution of private property - that producers will have no incentive to improvement of technical efficiency without a "profit motive". A fair discussion of this point demands clarification of certain vague notions about profit. It cannot be considered identical with monetary gain, being merely a particular species of monetary gain. Professor Pigou has this to remark about making a profit: "It implies performing

.....an entrepreneur's function, hiring the services of other men or buying goods from other men selling the product of the services or the goods and obtaining as a reward the difference between outlay and receipts." Therefore to remove profit is not to remove the motive for greater effort in the form of monetary personal gain, for profit is only one such type of gain, not generally offered now, as will be explained later, to the all-important class of managers and technicians.

Perhaps, however, remuneration by profit is necessary for technical efficiency. Many statements are issued today by supporters of capitalism extolling the advantages of private enterprise, with such vague comments as: "greater scope for initiative", "a readiness to take a risk", "freedom of action in response to change". In the opinion of the writers of these phrases, government ownership of the means of production would stifle the ceaseless creation and initiative, to the ultimate ruin of society. Alfred Marshall did not believe in the creative powers of a government-owned concern. The analogy he used to express this belief was that "a government could print a good edition of Shakespeare's works, but it could not get them written....If government control had supplanted that of private enterprise a hundred years ago, there is a good reason to suppose that our methods of manufacture now would be about one-fifth as efficient as they are".(1)

This was probably true, in his time, because of a relatively

(1) Memorials of Alfred Marshall, pp. 338-9
(2) A. C. Pigou, Socialism vs. Capitalism, p.3

undeveloped form of corporation and a relatively greater prevalence of free competition. But today, the major portion of industry is operated by joint stock corporations which separate the incentives to technical and managerial efficiency almost completely from the ultimate net earnings of the enterprise. In general, the person or group of persons who takes the profit arising from a difference between receipts and disbursements (and this often inflated by monopoly conditions) is not the same person or group who actually combines the factors of production in the manner prescribed to secure lowest total unit cost. The bulk of the accomplishment in modern industry generates from salaried production managers and technical experts, rather than from the class sharing the profit. Marshall's opinion would not be the same today, for the adventurous spirit of the business man of old has been replaced by a sense of caution. His vested interest in the present economy has transformed him in many respects into an opponent of progress. It is true that in cases where competitive forces are real and active bankruptcy will be an adequate check on inefficient entrepreneurs, but these are counterbalanced, to some extent, by cases in which the element of monopoly serves to keep alive the inefficient firm.

How is one to determine whether the socialist state will have the required incentive for attainment of technical efficiency? There is a better way than logical generalizations - the examin tion of an actual socialist experiment in the U.S.S.R. The facts of the case being hard to authenticate, any conclusions must be doubtful. It is probably true that the general standard of living in Russia is little above the subsistence level, and compares unfavourably with that enjoyed by workers under capitalism. On the other hand, the Soviet claims to be free from the twin bogeys of overproduction and unemployment that plague capitalist countries. But its primary objective is a program of economic growth and expansion, to develop a new technical base for the national economy, with the ultimate intention of satisfying consumers' needs. Russia presents the spectacle of a nation of enthusiasts fervently erecting an unprecendented capital structure from which they anticipate deriving in the near future a rapidly rising standard of civilization. In order to promote heavy industries and power development, these are, of course, given priority in the apportionment of resources for the time being, with the result being a present neglect of consumers' interests.

Before the German invasion of Russia in 1941, the argument was strongly voiced that the primitive nature of Russian economic development made any change a change for the better. A country like Russia could be careless in regard to economic calculation, even destroying the actual accounting apparatus, but grave mistakes in overproduction would be impossible in a country which lacked everything. Therefore the success of the socialist experiment could not be proven by pointing to the contrast in recent growth between Russia and the other countries. But the judgment of the world, at a time when Russia is successfully conducting a mechanized war, must be that the Russians are succeeding in their aforementioned goal. War, if nothing else, demands a well-developed, efficient, economic system of production, and here Russia compares favourably with the capitalist nations.

With regard to incentive, Russia certainly proves the point that socialism can substitute other motives than the profit motive. Although the people of Russia are accustomed to frugality and poverty, it is still true that they have accepted great hardships with enthusiasm. There is a powerful influence at work which makes for sincere and earnest effort. Here is a force comparable to a religion. It is of the nature of a moral and ethical ideal associated, perhaps, with an emphasis on social cooperation rather than competition. One all important job of any socialist government must be to instill this force in the people by extensive education in the ideals of socialism, with a view to developing a motive to replace the urge of business success.

If forced by evidence to agree that the Russian socialist experiment is successful, a capitalist debater might next ask: "Perhaps the Russians can accomplish this by submitting to the doctrines of totalitarianism, but can we repeat their success and still retain our cherished democratic way of life?" And it is only natural that such a question should be asked, for at least one exponent of deliberate economic control, Germany, has so chosen its objectives that these can be achieved only at the expense of civilization itself. No socialist scheme can be considered apart from the goal it has erected. The power that is put in the hands of the state by means of the institution of public ownership would be very dangerous in the hands of bureaucrats or militarists. The pseudo-socialism that might be established could better be named fascism.

But where a common social objective is mutually appreciated and therefore desired the forces of democracy will be more fully utilized than ever before in the approach to that objective. For a coherent social action must be the result of widespread selective reactions subjected to criticism and adaptation. In other words, society will be compelled to exercise free thought, voluntary action, and experimental effort. And as the outcome of such a process, socialism becomes the chief justification and the ultimate fulfillment of the democratic way of life. When objection is raised to the principle of wholesale economic planning as implying control rather than freedom, the answer comes readily that the essence of democracy is control by consent. Coercion will need to be applied only to anti-social elements; only supporters of these elements could object to such control.

The above paragraph represents the essence of socialist idealism. It is the socialist counterpart of the capitalist prayer for free enterprise. Both of these idealistic economic and political philosophies are presented daily for the benefit of the Canadian public. For Canada is in a period of transition. It therefore seems appropriate in this thesis on socialist economic theory to say a few words about the practicability of socialism in Canada.

The problem presented by the transference of the means of production from private to public ownership is one of unique importance in Canadian affairs, because such a large proportion of capital invested here is foreign owned. The suggestion is not that a foreign capitalist is more anti-social than a domestic capitalist (if such a term as anti-social can be applied to a capitalist upon the advent of a socialist regime). But the domestic owner is more easily subject to taxation and can be more readily compensated, whereas the foreign investor will be in a position to demand preferential treatment by threats of trade retaliation in the form of embargoes on essential imports, or seizure of Canadian export credits abroad, or perhaps even armed intervention. The latter form of retaliation would be feasible only where the Canadian people were obviously not strong and united in their convictions as to the adoption of a socialist scheme of planning. But adequate compensation, as agreed upon by some court of appraisal, must go to the present owners for relinquishing or being compelled to relinquish their capital claims. Despite the fact that such compensation would give the country a huge burden of debt, simple repudiation would be too dangerous a step for a newly-elected party. Any Canadian socialist government must make a plain and honest statement of its obligations to the foreign investor. This question of the foreign investor is included here as a sample of the type of problem facing a Canadian socialist government.

Any attempt, in Canada or elsewhere, to make drastic changes in the economic setup must be fostered by a strong political movement, educating the people to socialist principles and instilling in them a faith in their chosen course of action. It must be repeatedly emphasized that revolution is not the most advisable method of transition.(1) The middle class in society attaches a great deal of importance to the security and continuity of economic life, which is reflected in utter hostility to violence. The method of approach is persuasion, the construction of a disposition to cooperate rather than a disposition to fight. As Barbara Wootton remarked: "The armies that have been taught to roar like lions will learn with difficulty to coo like doves and simultaneously to work like horses."(2) With the proper disposition established, a planned economy can be built under social control without a revolution in the class structure. Of this, the Canadian socialist party appears perfectly aware, for the program has been one of extensive education in socialism, rather than excitement to revolt.

It becomes evident that no adequate discussion of the economic success of a socialist party in a democracy can avoid political issues. The essence of the substitution of collectivism for individualism is that the government rather than various individuals will make the decisions which will immediately direct the course of the country's life. Can a government owning the

(1) If by education, or propaganda, or any such means, people are given sufficient faith in the correct means to an end, they are inclined to lose sight of the end through fascination with the means. A fanatical belief in the means almost makes it an end in itself. The less concrete the end, the more easy to lose sight of it or to reshape it to conform to the position towards which the means is leading you. Rather than getting what you want you find yourself wanting what you get. It is of supreme importance, therefore, to realize in gathering enthusiasm for the reforms of socialism, that what is desired is maximum social happiness, and not complete industrial socialization.

(2) B. Wootton, Plan or No Plan, p. 295

bulk of the productive wealth of a society, and managing its production and distribution, remain democratic? Since the democratic political process is inherently competitive, substitution of political for business competition would tend to aggravate evils like concentration of power. And it would be difficult to prove that, given the powers that socialism demands, the socialist parliament would possess the capacity for government or for collective management to justify an experiment in wholesale planning.

Moreover, there is collective ignorance and apathy on the issues involved in a change-over from capitalism to socialism which must be remedied before a socialist government can be successful. An idealistic goal of social welfare will call for a realization on the part of the Canadian people of the full implications and responsibilities of complete socialization, and the conviction and economic intelligence necessary to achieve it.

Without any further explanation of the many and varied questions involved in the actual conducting of a socialist experiment in a country like Canada, one conclusion appears obvious that the principal problems will be sociological and political in nature rather than economic. No claim to originality is made here, for almost every economist who has written on the subject of socialist economic theory arrives at the same opinion. Even Dr. Hayek, who objected so strongly to the idea of collective ownership, furthered its ends by appealing that economists find a practicable solution to the difficulties he considered peculiar to socialism, in these words: "In a world bent on planning, nothing could be more tragic than that the conclusion should prove inevitable that persistence on this course must lead to economic decay....Even for those who are not in sympathy with all the ultimate aims of socialism, there is strong reason to wish that now the world is moving in that direction, it should prove practicable, and a catastrophe be averted."(1) Taking into consideration the theoretical developments since Hayek wrote these words, one can safely say that the economically practicable plan has been found by Lange and Lerner.

Rather than "finding a plan", the process could be better described as "arriving at a fuller appreciation of the universality of economic law". In an individualist economy, the economic laws state that, given certain conditions of nature and technique, and certain consumers' preferences, human producers will behave in a certain way, thus creating value relations. In a socialist economy, the same laws state that, given a certain purpose, a determinate course of action will achieve it. In both socialism and capitalism, the economic laws express the nature of relationships existing between economic goods and social organisms. They will define man's powers with reference to the materials he handles, and, given his purpose, can advise his actions. Perhaps a different type of social organization will give a new significance to collective purpose; Accomplishment of that purpose will require a material, technical, and scientific program.

The place of marginal economics in a collectivist society is not essentially different from its place in an economy of competitive

(1)Hayek, op. cit. pp. 242-243

individualism. Resources must be allocated among the different want-satisfying uses in accord with the principle of marginalism. The correct apportionment will not depend on the institutions of private or of public property. Perhaps the socialist government will cherish some other ends than the satisfaction of individual wants, but even these ends will follow some principle of diminishing marginal utility. The nature of the objectives will probably be so wide in scope that the available resources will be relatively scarce, necessitating quantitative comparison of the relative importance of results of different combinations.

In regard to the problems of correct relations between the present and the future, the socialist economy faces the same situation as the capitalist economy....Even without progress there would be change, and therefore some plan to meet this change, such a plan would involve the allocation of resources between present and future use. Capital accounting would occupy as important, if not a more important role than in a capitalist economy. Saving and investment activity would be directed on the same principles of capital and interest theory as are used by individuals and business enterprises today.

One general conclusion arises immediately out of the investigation into socialist economic theory - the socialist state will confront the same economic problems as the capitalist state; if it solves these problems economically, it must be guided by the principle of marginalism, for this is the universal principle of economizing behaviour. The above investigation appears to indicate that, from the standpoint of equilibrium theory, socialism will allocate resources to satisfy the needs of society better than capitalism, because the former will be able to follow the marginal principle more closely than the latter.

This observation represents the sum total of evidence that an economist, as such, can provide for a debate on the relative merits of capitalism and socialism. Any further statement must be put forward with care, for the removal of the right of private ownership is an action with far-reaching implications. As Alfred Marshall warned: "It is the part of responsible men to proceed cautiously and tentatively in abrogating or modifying even such rights as may seem to be inappropriate to the ideal conditions of social life." (1)

Since socialism is essentially a project of social planning, it deserves, therefore, comprehensive investigation on the part of all social scientists. The economist has demonstrated the economic feasibility of socialism. But the sociologist and the politician must give the final answer as to whether socialism will serve society better than capitalism.

(1) A. Marshall, Principles of Economics (8th ed.) p. 48

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