

The market in a socialist economy

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A survey of the history of the problem

It seems necessary to make a brief survey of the treatment of the principles of the functioning of a socialist economy, not only to avoid the rediscovery of old truths but also because an objective recapitulation of the achievements of the last decade is a basic factor in the elimination of Marxist economic science from the solecism of dogmatism.

For a number of years the application of the history of Marxist economic thought to actual political needs was either through a peculiar interpretation of the Marxists' writings or by simply removing names and works which were regarded as politically compromising from the history of science, the bookshelves and the card catalogues. As a result, Marxist political economy, especially the political economy of socialism, was rather like the hero of Channisso's classic *Peter Schlemihl*—a man without a shadow. If we discount the small number of official pronouncements and documents (which even then were generally interpreted in isolation from the actual circumstances in which they arose) it was a science without a history.

Similarly Marxists frequently ignored non-Marxist or unofficial Marxist writings devoted to the problems of the functioning of a socialist economy. This constituted yet another factor in the impoverishment of our own scientific achievements in the field.

Thus there is sufficient reason to justify devoting some space to an excursion into the past. However it will be nothing more than a foray and not an attempt to present a systematic history of the problem. (The latter task is currently being attempted by several young Polish economists.) From the vantage point of the problems being discussed at the present time I shall be concerned with some aspects of the work of three groups of writers, who have from time to time pronounced on the subject of the principles of the functioning of a socialist economy. The first group is Marx and his followers, up to the period immediately after the October Revolution; the second comprises those who took part in the discussion on economic calculation in socialism during the interwar period, and the third comprises

Soviet economists who made commentaries during the 1920s.¹

Marx and the Marxists in the pre-revolutionary period (including the later works of Lenin)

One of the chief differences between the Marxists and the Utopian socialists is the former's extreme caution in describing the future socialist society. This fact derived from a feature which marked the vision of the creators of the modern socialist idea—an approach which was both scientific and revolutionary. Scholars, and at the same time revolutionaries, they devoted their whole attention to an analysis of the laws of capitalist development. They sought thereby to be armed with a correct understanding of historical processes, through which old orders were replaced by new ones. The construction of castles in the air was not only at odds with science but also with the tasks of revolutionaries. As August Blanque wrote: 'Are we in possession of the plans and materials, do we have all the elements necessary for this precious construction (socialism)? The sectarians say "yes". The revolutionaries say "no", since they know much better the nature of the future which belongs to socialism.'²

This is not to imply that there was nothing of interest in pictures of the future society painted by the Utopian socialists; special significance exists for socialism in countries that were backward in economic development. Nor were Marx and the Marxists free from the influences of these Utopian ideas in the period before the Revolution. However, they did realize that they lacked a sufficient basis for scientifically demonstrating actual forms in the future socialist economy. Furthermore they were aware of the inherent dangers of scholasticism for practical revolutionary activity. For these reasons they not only restrained themselves from such discussions but also tried to discourage others.³

¹ It is something of a problem to establish the order in which the various views dealing with the principles of a socialist economy should be discussed. The order which I have adopted is not perfect. I have, for example, separated party programme documents and the works of Lenin written in the period immediately after the October Revolution from the views put forward by Soviet economists in the 1920s. Nevertheless my solution does have its own logic. We start with hypotheses about the future socialist economy (the works of Lenin open a new stage, but they are closely connected with the writings of the previous period) and go on through theoretical discussions largely detached from actual practice to attempts directed towards a generalization of the actual operation of a socialist economy.

² *Critique Sociale*, vol. 2, p. 194, cited by E. Preobrazhenski in his 'Sotsyalisticheskiye i kommunisticheskiye predstavleniya o sotsializme', *Vestnik Kommunisticheskoi Akademii*, no. 12, 1925.

³ See, for example, the ironic remarks about Wilhelm Liebknecht in the correspondence of Marx and Engels in 1876.

If I call attention again to these well-known points it is because one can still encounter attempts to discover in Marx answers to specific problems on the functioning of a socialist economy. Concomitantly such attempts carry various efforts to condemn various opinions because of their supposed lack of agreement with Marx.

It is true that there are a few statements by Marx and Engels on the principles of the functioning of the future socialist economy; they are of very general character and are little more than leading ideas which arose in two contexts:

1. In connection with the analysis of the capitalistic pattern of development, most frequently in order to emphasize the transitory nature of the capitalist mode of production. A number of such remarks in *Capital* were meant to fulfil the same function that is served by the anatomy of man when considered as a key to the anatomy of the ape.

2. As a result of the practical needs of the ideological struggle, especially when it was necessary to oppose false theses in political programmes. Among other things this is the source of the comments on socialism in *Critique of the Gotha Programme* and in the third part of *Anti-Dühring*.

The question of the programme to be followed by the future socialist government immediately after the Revolution must be handled separately.

Lenin, like Marx, avoided the building of a Utopian vision, although problems of the transitional period from capitalism to socialism are discussed by him in greater detail, especially in the period shortly before the Revolution.

The paucity of systematized and developed analysis of the functioning of a socialist economy does not necessarily mean that no conclusions can be divined from the work of Marx and Engels. Such conclusions, or—perhaps better—suggestions, are undoubtedly there, though they are not always explicit.

Most of the material concerned with the functioning of a socialist economy is found in conjunction with criticism by Marx (and Engels) of the role of the law of value as a regulator of capitalist production.¹

Marx begins by demonstrating the spontaneous and, from the macro-economic point of view, expensive process whereby the distribution of society's labour (satisfaction of the various sectoral and industry-wide labour markets) is achieved by the law of value. In so doing, and while showing how, spontaneously acting and wasteful from the global point of view, the law brings individual inputs per unit of output into socially necessary dimensions, he contrasts this form of regulation *ex post* with the conscious regulation *ex ante* in an

¹ For interpretation of the law of value, see chapter 4.

economy based on the social ownership of the means of production. In this connection, Marx stresses the similarity between a conscious regulation of the division of labour on the social (macro-) scale and the regulation of the division of labour within an enterprise.¹

The *a priori* system on which the division of labour, within the workshop, is regularly carried out, becomes in the division of labour within the society, an *a posteriori*, nature-imposed necessity, controlling the lawless caprice of the producers, and perceptible in the barometrical fluctuations of the market prices. Division of labour within the workshop implies the undisputed authority of the capitalist over men, who are but parts of a mechanism that belongs to him. The division of labour within the society brings into contact independent commodity producers, who acknowledge no other authority but that of competition, of the coercion exerted by the pressure of their mutual interests; just as in the animal kingdom, the *bellum omnium contra omnes* more or less preserves the conditions of the existence of every species. The same bourgeois mind which praises division of labour in the workshop . . . denounces with equal vigour every conscious attempt to control socially and regulates the process of production . . . It is very characteristic that the enthusiastic apologists of the factory system have nothing more damning to urge against a general organization of the labour society into one immense factory.

Marx does not find the latter prospect at all disturbing. On the contrary, the very nature of the division of labour, consciously directed from a central point of control and not by means of market mechanism of signals and incentives is basic to Marx. This is a basic feature of 'a community of free individuals, carrying on their work, with the means of production in common, in which the labour power of all the different individuals is consciously applied as the combined labour power of the community.'²

This applies equally to the division of the whole of society's labour between the output of consumer goods and the means of production and also to the division among different areas within each of these groups.

It is here, in my opinion, that the *first*, and very essential suggestion for the organization of a planned socialist economy is to be found in the Marxist analysis of capitalism. All the other ones are, in fact, contained in it.

Marx's second very essential suggestion for organizing a planned socialist economy is closely connected with the first. From the

¹ K. Marx, *Capital* (Moscow, 1954), vol. 1, p. 356.

² *Capital*, vol. 2, p. 78.

beginning, a society which divides labour in a direct way among various uses must also define in advance the amount of that labour necessary per unit of output (labour input coefficient).¹

From the moment when society enters into possession of the means of production and uses them in direct association for production, the labour of each individual, however varied its specifically useful character may be, becomes at the start and directly social labour. The quantity of social labour contained in a product need not then be established in a roundabout way; daily experience shows in a direct way how much of it is required on the average. Society can simply calculate how many hours of labour are contained in a steam engine, a bushel of wheat of the last harvest, or a hundred square yards of cloth of a certain quality. It could, therefore, never occur to it to express the quantities of labour put into the products, quantities which it will then know directly and in their absolute amounts . . . in a measure which . . . is . . . relative . . . rather than in their natural, adequate and absolute measure, time . . . Hence, on the assumptions we made above, society will not assign values to products. It will not express the simple fact that the hundred square yards of cloth have required for their production, say, a thousand hours of labour in the oblique and meaningless way, stating that they have the value of a thousand hours of labour . . . People will be able to manage everything very simply without the intervention of much vaunted 'value'.

Consequently, the direct division of labour and the direct determination of the necessary input per unit of output requires in a socialist society calculation in physical terms.² The conversion of economic calculation to physical terms presupposes a new role to be played by use-value in an economy where the main concern is to satisfy social needs.³ Apart from these factors the importance of calculation in physical units has its roots in the macro-economic nature of the problem facing a socialist economy. This difficulty

¹ F. Engels, *Anti-Dühring* (Moscow, 1954), pp. 429-30.

² It is difficult to answer definitely how Marx and Engels imagined the calculation of inputs and results in physical units. One must suppose that what they had in mind was the expression of outlays in units of labour time while results were expressed in the physical units most suitable for the individual products (of volume, weight, energy, etc.).

³ Edward Lipiński noted this point as early as 1948 in 'Wartość użytkowa w ekonomii socjalizmu' ('Use-value in the economy of socialism') *Ekonomista*, no. 4, 1948. There are some interesting comments on the subject of use-value in Marx's theory contained in an article by Roman Rozdolski, 'Der Gebrauchswert bei Karl Marx', *Kyklos*, 1959, vol. 12, part 1. The author is a Marxist of Polish descent.

which Marx never explicitly linked with the socialist economy, derives from the mode in which he conceives the reproduction of 'the whole of society's capital'. Whenever the question of reproduction on the macro-scale arises, it is insufficient merely to consider its proportions from the point of view of value; it is absolutely necessary to consider its proportions in physical terms, too. Marx clarifies the question and makes his famous division of society's product into two departments (means of production and means of consumption).¹

So long as we looked upon the production of value and the value of the product of capital individually, the bodily form of the commodities produced was wholly immaterial for the analysis, whether it was machines, for instance, corn or looking glasses . . . So far as the reproduction of capital was concerned, it was sufficient to assume that the portion of the product in commodities which represents capital value finds an opportunity in the sphere of circulation to reconvert itself into its elements of production and thus into its form of productive capital; just as it sufficed to assume that both the labourer and the capitalist find in the market those commodities on which they spend their wages and the surplus value (that part of the total product which remains after payments to labour variable inputs and capital replacement). This purely formal manner of presentation is no longer adequate in the study of the total social capital and of the value of its products. The reconversion of one portion of the value of the product into capital and the passing of another portion into the individual consumption of the capitalist as well as the working class form a movement within the value of the produce itself in which the result of the aggregate capital finds expression, and this movement is not only a replacement of value, but also a replacement in material and is therefore as much bound up with the relative proportions of the value components of the total social product as with their use-value, their material shape.

The notion treated here on the role of physically expressed proportions in the macro-growth process is gaining ever more attention in the bourgeois theory of growth. Economists who handle the problem of growth realistically and are genuinely concerned with finding a solution are no longer satisfied with aggregate analyses. More and more they study key proportions in physical terms and search for ways of overcoming the problem of bottle-necks. The socialist economy which develops by the full (or nearly so) utilization of productive capacity and available labour force makes this question its

¹ *Capital*, vol. 2, p. 394.

special concern. Planning and physical calculation in these circumstances are indispensable; and as such constitute the third essential guide for the study of a socialist economy implied in the work of Marx and Engels.

The fourth problem is that of the allocation of the accumulated capital in a socialist system. It was Engels who elaborated this point in a criticism of Dühring. The latter had proposed a division of the whole of the social product (sum of the gross outputs of all the sectors) among the individual members of society. Among other things this would mean that the individual would be entrusted with dividing income between consumption and saving (accumulation).¹

The worker should receive the 'full proceeds of labour'; not only the labour product, but labour itself should be directly exchangeable for products; one hour's labour for the product of another hour's labour. This, however, gives rise at once to a serious hitch. The whole product is distributed. The most important progressive function of society, accumulation (saving), is taken from society and placed at the arbitrary discretion of individuals. The individuals can do what they like with their 'proceeds', but society, at best, remains as rich or as poor as it was. The means of production accumulated in the past have, therefore, been centralized in the hands of society only in order that all means of production accumulated in the future may once again be dispersed in the hands of individuals. One knocks to pieces one's own premises; one has arrived at a pure absurdity.

It follows unequivocally from this assertion that the main part of the accumulated capital should be gathered in the hands of society as a logical consequence of the socialization of the means of production.

Closely related to this point is the fifth essential element in which the views of Marx and Engels have meaning for the functioning of a socialist economy. This problem, the criteria for the division of national income among individuals, is initiated in the *Critique of the Gotha Programme* and further elaborated by Lenin in chapter 5 of *State and Revolution*. The principle of income distribution according to labour in the socialist stage of development is generally accepted by Marxists and does not need further explanation.

Instead let us attempt a summary of this point and some general conclusions. The socialist economy should have the following features:

- 1 direct, *ex ante*, regulation of the social distribution of labour;
 - 2 direct determination of labour input coefficients, for both living
- F. Engels, *op. cit.*, pp. 432-3.

and embodied labour (a crystallization of labour time found in capital goods);

3 equilibrium of supply and demand in physical units;

4 the distribution of social product in accordance with the satisfaction of general needs, and at the same time the allocation of the fund intended for individual consumption according to the amount of labour contributed;

5 centralization of the saving and investment decisions.

Admittedly these five points do not present a full picture especially since they are not formulated directly but in contrast to capitalism. However, they do give a rough outline. To the creators of scientific socialism there was to be, in contrast to capitalism, a centrally planned economy, one in which the main elements of social reproduction were not subject to the uncontrolled operation of the law of value (Maurice Dobb calls this 'economic law'; *Soviet Economic Development since 1917*, New York, 1948, p. 325). All of Marx's writings on political economy emphasize his opposition to the capitalist situation in this regard, and, therefore, to look among them for a theory of the operation of the law of value in socialism is futile. Even when he uses the term 'value' with regard to a socialist society¹ he means neither value as the feature of a commodity nor the law of value as the law of commodity production. He refers to the direct calculation of social labour.

How, then, are we to assess the conclusions to be drawn from the work of Marx and Engels? If these few points are taken as general assumptions, as the broadest of outlines to the functioning of a socialist economy, then they are remarkable for their accuracy and are entirely borne out by practical experience and later theoretical elaboration. Understandably they do not exhaust the problem but only provide its skeleton. The discovery of the 'laws of motion' of the capitalist mode of production provided a *contrario* data for a rough sketch of a socialist economy: they could not and did not, however, make the construction of an advanced model possible.

In spite of this, both the rank-and-file socialists and intellectuals (including theoretical economists) came to believe that a direct system of physical-term distribution which controlled the factors of production and production itself would correspond most literally to the reality of the socialist economy.

Did this view correspond with the intentions of Marx and Engels? If we ignore their reluctance to scientifically describe the future socialist economy and draw conclusions from scattered incomplete statements, the answer would be 'yes'. At any rate in their work it is

¹ See e.g. *Capital*, vol. 3, pt. 2, p. 826; *Critique of the Gotha Programme* (Marx and Engels Selected Works (Moscow, 1950), vol. 2, p. 13).

comparatively easy to find corroborating formulations and hard to find contradictory statements—for instance, one's foreseeing the introductions of market forms. Moreover, from the point of view of the creation of ideology and its influence on practice, the ultimate important fact is what the socialist movement *understood* Marx to have said. And of this there is no doubt.

Everywhere, in scientific monographs, the socialist party programmes and brochures and propaganda articles, are found discussions of a production process in which all the elements, down to the smallest detail, are determined *ex ante*, by a central planning body. We can see there also an economy without exchange prices and money and of gigantic warehouses and stores distributing products on the basis of work coupons, etc.

Obviously, this situation was not merely the result of a certain interpretation of the view of Marx and Engels. A number of factors are involved (a) *Utopian influence* which was criticized primarily for its false concept of the way in which a transition to socialism would be made rather than for its view of the future society; (b) the conviction that in every element socialism would be the opposite of capitalism (especially regarding the market mechanism which was treated not as a form able to absorb a new socio-economic content but simply as a feature of exploitation); (c) an overvaluation of apparent tendencies toward concentration in capitalism (according to some Marxists, especially Hilferding, in *Das Finanzkapital*, this was supposed to lead rapidly to the concentration of the whole of production into a few trusts and of the whole credit system into a few giant banks). Lenin cautioned against such an interpretation of capitalism's monopoly stage ('imperialism and finance capitalism are a superstructure on old capitalism').¹ But at least, to the time when it was possible to draw conclusions from the first experience of the Revolution, he did not draw conclusions from it which were applicable to the functioning of a socialist economy.

Apart from the works of Wilhelm Liebknecht, mentioned in chapter I, it must be conceded that even the most important pre-revolutionary attempt to outline the mechanism of the future socialist economy, Kautsky's *Die soziale Revolution*² (especially the second part), is lacking in realism. He is vaguely aware of the 'technical' difficulties in achieving a system of in-kind distribution, but he did not consider them of any great importance. The difficulties inherent in the management of production from a single centre could be removed by eliminating the numerous small-scale enterprises and

¹ V. I. Lenin, 'Speech on the Party Programme at the 8th Congress of the Russian Communist Party (b)', *Works* (in Polish), vol. 29, pp. 156, 506.

² K. Kautsky, *Die soziale Revolution* (Berlin, 1902).

concentrating production into a few larger ones. He also considered that income equalization would eliminate or minimize the difficulties arising from the varied structure of demand. Even in Kautsky's work the germs of differentiation between the law of value and the money-commodity forms in socialism can be clearly seen. For example, he allows money to be used as a technical means, while expressing the general belief that the ground for the operation of the law of value will disappear with the socialization of the means of production.¹

The need to regulate production by the exchange of various values (barter) will cease to exist. At the same time the need for money to act as a measure of value and as a representation of the substance of value (*Wertgegenstand*) is also removed. . . . The prices of products can now be established independently of value although the labour time which is embodied in them still has a major significance in the determination of these prices. . . .

In his work, Kautsky indicated that the theses contained in it should not be taken axiomatically. He vigorously opposed all claims that only one system of the functioning of a socialist economy could be constructed. Special attention was paid to the mutual relationships of different forms of ownership and methods of democratizing economic management: 'Nothing could be more mistaken than to imagine the socialist society in the shape of a uniform, rigid mechanism, the wheels of which, once set in motion, continually revolve in the same unchanging fashion.'²

Some years later, in the face of imminent socialization of Germany, Kautsky and other social democrats (among them Otto Bauer) began to abandon their previous position and to oppose the primitive supporters of an economy based on in-kind distribution (Balod, Neurath, etc.). This turnabout was inspired partly by their experience of the German war economy. Kautsky's later book, *The Proletarian Revolution and its Programme*, contains a number of novel views among which is his attitude toward the problem of commodity production in socialism. This development was partly influenced by his critical opinion of 'war communism' in the USSR.

Still later, in the interwar period, different views were held by social democratic theorists on the question of the mechanism of a socialist economy, many favouring the idea of a 'competitive socialism'.³ A Polish example was the left-wing youth group of the Polish Socialist Party, *Plomienie*, which formulated principles of a socialist

¹ *Ibid.*, p. 19.

² *Ibid.*, pp. 36-7.

³ See *infra* pp. 22-4.

economy based on the 'competitive solution' of H. D. Dickinson.¹

However, the stand taken by communists, and especially the Russian Communists, on the question of the socialist economic mechanism, has far more adherents for obvious reasons. The reality of practice, in general, kept the basic point of view close to that described above. With this in mind, the main effort of theoretical economists was aimed at explaining why it was not yet possible to establish an economic system founded on distribution in physical terms. The theory was that a completely centralized, moneyless economy should be introduced as quickly and consistently as was possible. Not only Bukharin and Preobrazhenski in the *ABC of Communism* but also Lenin in his own writing in the period of 'war communism' and in the transition to NEP promoted this type of view.²

More clearly than other leaders, Lenin realized the need both to preserve and to normalize money-(for)-commodity relations (the use of money in purchasing rather than other goods in barter) immediately after seizing power. This was evidenced in, among other things, the role he attributed to the currency reform preparations for which were nearly complete.³ The attainment of these aims was frustrated by the outbreak of Civil War and the necessity to introduce the system of 'war communism'. It is evident that Lenin clearly understood the nature of the causes which underlay this necessity and realized the abnormality of the situation. Nevertheless it occurred to him that such a peculiar situation might be more than a mere episode. He realized that *faits accomplis* influenced by the necessity of total mobilization in defence of the revolution, might become irrevocable, so that what seemed impossible in the light of the cold analysis of all economic assumptions, might become a reality. It might be possible to jump directly to a 'purely communist' organization of production and distribution. Doubtless in this interpretation of the circumstances is concealed the basic feeling that money-commodity relations are a necessary evil to be eliminated at the first opportunity. 'War communism' provided the opportunity and it had to be utilized. Lenin made no secret of this attitude when

¹ Cf. *Gospodarka-polityka-taktyka-organizacja socjalizmu* (*The Economy-Politics-Tactics-Organization of Socialism*), Warsaw, 1934.

² Lenin's views are discussed here and not in the section on the 1920s since they, together with the views of Marx and Engels, constituted the starting point for the theoretical discussion referred to above.

³ V. I. Lenin, *Collected Works*, London, n.d., vol. 23, pp. 32-5, Speech at the Congress of Representatives of Finance Departments of Local Soviets, May 18, 1918.

he said later: 'We calculated—or perhaps more accurately, we supposed without any grounds for doing so—that we would be able, in a land of small peasant holdings, to organize state production and state distribution of products according to communist principles. Time has shown our mistake.'¹

Even exposing this error did not remove the pressure of the conviction that an economic system of physical-term distribution was the only form which corresponded to the dictatorship of the proletariat. No alternative conception could easily replace it. Lenin stated, 'there was a change in our economic policy; instead of a requisition, a tax was introduced. This was not conceived full-blown but was pieced together over several months. Over a period of months in the Bolshevik press, you can find a whole series of propositions, but nobody could find a project which really guaranteed success.'²

'NEP, a project really promising success' came to life shortly, undoubtedly as a result of enormous personal effort on Lenin's part. However, it is interesting that even in NEP there were attempts to preserve commodity forms of exchange in the countryside, by direct exchange of products in local trade. These attempts to avoid the intermediary of money were unsuccessful.³

A series of decrees and decisions, a mass of articles, wholesale propaganda, large scale legislation—beginning in the spring of 1921—was aimed at the increase of commodity exchange [i.e., the direct exchange of products] . . . And what happened? It turned out . . . that nothing came of the commodity exchange: nothing came of it in the sense that it assumed the form of buying and selling. And we must now realize this if we do not want to hide our heads in the sand, if we do not wish to act the part of people who cannot see when they are beaten, if we are not afraid to face the danger.

From the situation Lenin was able to fathom a number of profound practical lessons as well as a series of theoretical conclusions. He perceived that market links with the countryside, especially when socialist industry was weak and burdened by a large sector of small-scale producers, menaced planning with inundation by a tide of market spontaneity. His response to the danger was not by paralysing the money-commodity relations but by mastering and transforming them into an instrument of socialism. During the inauguration of the NEP Lenin returned to certain ideas outlined in 1918 in

¹ V. I. Lenin, *Works*, vol. 30, p. 42 (Polish edition).

² On the Tactics of the Russian Communist Party at the Second Congress of the Communist International', V. I. Lenin, *Works*, vol. 30, p. 517.

³ *Ibid.*, vol. 23, p. 84.

Left-Wing Communism: an Infamile Disorder. In connection with the NEP he developed the idea of using money-commodity forms in the socialist state during the transition to communism.

Important to this conception was the assertion that these money-commodity forms in NEP could not be limited to links between town and countryside; they must include the socialist sector.¹

The adoption of so-called *khozraschet* [see p. 44] in state enterprises is by force of circumstances very closely connected with the New Economic Policy, and in the near future this type of undertaking will undoubtedly predominate—if it is not the only type. When free trade is allowed and develops, this in fact means the adoption by state enterprises of commercial principles to a large extent.

In this situation it was clearly necessary to base the criteria of the efficiency of state industry on profitability thereby involving broad areas of autonomy for enterprises or their associations (trusts). Lenin realized that the use of market forms in the mechanism of the functioning of state enterprises did not necessarily mean the abandonment of central planning. If the basic decisions belong to the state and its institutions and where there is still the possibility of state intervention in the activity of an enterprise, planning exists. Succinctly stated the formula is this: 'The new economic policy does not change the unified state economic plan and does not go beyond its framework, but it alters the means by which it is realized.'²

Without a doubt Lenin's pronouncements in the years 1921-2 constitute a basic step forward in understanding the relation of the plan to the market and the role of money and commodity exchange. (Later we shall see that they had an important influence on Soviet economic science.) Equally there can be no doubt that Lenin referred directly to the mixed economy of the transitional period when he considered the question of applying market forms. Further he saw the necessity of them as a result of factors external to socialism—the large small-scale peasant sector and the low level of industrialization. Thus it is impossible to conclude from Lenin's work that the system of 'war communism' is basically erroneous. The mistake is not in the premises of the system themselves, but in the fact that it was introduced prematurely before the conditions were ripe. We see that for the planned socialist economy in the strict sense (i.e. the situation when all the means of production are socialized) it remains true that the only suitable system is one which is highly centralized and in which production and distribution are controlled in physical terms.

¹ *Ibid.*, pp. 185-6.

² *Ibid.*, vol. 33, p. 84.

As suitable conditions arise this system ought to be brought into existence.

Two documents of major ideological importance support this interpretation—the programme of the Russian Communist Party of 1919 (8th Congress) and the programme of the Communist International of 1928 (6th Congress).

In the programme of the Russian Communist Party, point 3 of the chapter devoted to general economic problems reads:¹

The decay of the imperialist economy bequeathed to the first period of Soviet construction a largely chaotic organization of production and management. As one of the basic tasks there is all the greater need to achieve the maximum unification of the whole of the country's economic life by means of a state plan. Further, there is the necessity of achieving the maximum centralization of production in three senses: a, merging of production by branches and groups of branches; b, a concentration of production in the best possible productive units; c, an acceleration of the realization of economic tasks.

In distribution (point 13):

In the field of distribution the task of the Soviet authorities at present still consists of replacing trade as quickly as possible by the planned state-wide distribution of products. The aim is to organize the entire population into a uniform network of consumer communes which will be able to conduct the distribution of indispensable products rapidly, economically, in a planned way and by a strict centralization of the entire distributive apparatus.

In the money and banking systems (point 15):

In the first phase of the transition from capitalism to communism, so long as the communistic production and distribution of products has not been fully organized, the abolition of money is impossible . . . Basing its policy on the nationalization of the banks, the Russian Communist Party intends to realize a number of measures expanding the sphere of accounting without money and preparing for the abolition of money: the obligatory depositing of money in bank accounts, the introduction of budget books, the replacement of money by cheques, short-term coupons entitling the holder to products, etc.

The same pattern—a merely temporary tolerance of money—commodity trade and the intent to introduce direct methods of

¹ All the quotations are from the *KPSS v Rezolutsiynakh i Resheniyakh Syezdov, Konferentsii i Plenumov CK* (Moscow, 1953), Part 1, pp. 421, 425-6, 427.

in-kind distribution as quickly as possible—appears in the programme of the Communist International. The significance of this document is enhanced by the fact that it does not limit itself to the analysis of conditions existing in any one country. Not only does it deal with problems generally but, it will be remembered, the document was binding on all parties by virtue of the organizational principles of the International. For these reasons the theoretical parts of the programme were formulated with comparative care and expressed the views generally accepted in the communist movement. Hence added import must be attached to the pertinent sections. For example the sections describing the origins of the use of money in trade and the relation between plan and market (chapter 4 of the Programme):¹

Owing to the prevalence of a large number of small units of production . . . in colonies, semi-colonies and economically backward countries . . . and even in centres of capitalist world industry . . . it is necessary, in the first stage of [socialist] development to preserve to some extent, market forms of economic contacts, the money systems, etc. . . . Hence, the greater the importance of scattered, small peasant labour in the economy of the country, the greater will be the volume of market relations, the smaller will be the significance of directly planned management, and the greater will be the degree to which the economic plan will depend upon the forecasting of spontaneously developing economic relations. On the other hand, the smaller the share of small-scale production . . . the smaller will be the volume of market relations, the greater will be the importance of plan as distinct from spontaneity and the greater and more universal will be the role played by the methods of direct planned management in the sphere of production distribution . . . Provided the Soviet state carries out a correct policy, the process of development of market relations under the proletarian dictatorship will lead to its own destruction . . . thus they help to destroy market relations altogether.

These extracts can be seen to reiterate at least two basic points:

1. Money-commodity trade relationships are treated as external to the socialist economy; they derive from the existence of non-socialist sectors and their extent and importance depend almost entirely on the extent and part played by small peasant holdings (in applying this criterion the programme names the countries in which commodity relations will for a certain period have a broad, medium and narrow compass).

2. Money-commodity trade relationships, the market, are economic phenomena at variance with a planned economy—the

¹ *Programme of the Communist International* (London, 1929), pp. 31-3.

embodiment of the uncontrollable. According to the programme the scope and effectiveness of planning in the strict sense are inversely proportional to the extent of, and part played by, money-commodity trade relationships.

It is worth noting the date when the document was drafted. These are no longer the years immediately following the October Revolution; this is the beginning of the second decade after the Revolution—the period when the five-year plan offensive was opened and the collectivization of agriculture was started. It is indisputable that formulations contained in the programme of the International had more than a theoretical significance.

This brings us to the termination of the first part of our historical survey. The most important conclusion is that in the theoretical and ideological outlook of the revolutionary movement was rooted the conviction that the socialist economy is centrally planned not only generally but in all its elements. Furthermore, the market mechanism forms a foreign body in the socialist system which must be tolerated for a period but which should at all cost be eliminated as soon as feasible.

In the practical application of the principles of the functioning of a socialist economy this doctrinal standpoint has had an important influence. We cannot explain the history of the formation of the 'model' unless we take into account this factor (even if that history has, to some extent, been independent of strictly economic conditions and needs.)

The Western inter-war discussion of the problem of economic calculation in socialism

It may be that the above heading does not give an accurate description of the period within which the well-known discussion about economic calculation in socialism took place. Actually it began in the latter half of the nineteenth century or at any rate in the first years of this century. Moreover, the discussions were not terminated in the inter-war period but extended into the period after World War II. (Immediately after the war interesting attempts were made to synthesize the results to that time, but they went so far as to become new contributions to the discussions.) Despite this the limitation found in the heading can be justified since it was then that the debate developed on a large scale. In the earlier period individual contributions rarely met with a direct reaction, and in the later period the level of the disputes underwent an important modification.

As I have already made clear I do not intend to write a history of the problem. Nor do I intend to give a full account of the discussion

of economic calculation in socialism (especially since there are many serious attempts at a synthesis, with Abram Bergson's being distinguished by its precision and breadth of vision).¹ Rather I want to assess those aspects of the discussion which are important for the problems of the mechanism of the functioning of a socialist economy at the present time. Therefore, what is of interest is not the discussion as to whether socialism can be rational but the discussion as to the suitability of the various solutions which were considered. And I shall touch upon the general problems only in so far as it is necessary to make the main theme clear.

Oskar Lange begins his famous work on the economic theory of socialism² with an ironic passage in praise of Ludwig von Mises for the services which the latter rendered by drawing attention to the problem of economic rationality in socialism. As is evident from even our short foray into the views of Marx, the question of economic calculation (in its most general sense as the criteria and methods for choosing between different uses of the available means (resources) for the achievement of optimum economic results) was never, or hardly ever, the subject of consideration. Schaeffle, in *Die Quintessenz des Sozialismus*, and others (among them Kautsky's adversary, the Dutchman, N. G. Pierson), have drawn attention to this point. Pareto, and especially Barone,³ even attempted to produce their own theoretical solution of the problem. The particular importance of Mises,⁴ however, lies in the fact that, on the basis of the arguments already put forward, he attempted to form a coherent theory. In it he asserted that rational economic calculation in a socialist economy was impossible. We must remember that unlike previous works which dealt with the problems of the socialist economy in the pre-revolutionary period, Mises's article appeared at a time when socialism had ceased to be a theoretical problem. The 'social need', so to speak, for this kind of study was thus much greater and Mises's article subsequently, if not immediately, became very well known.

¹ A. Bergson, 'Socialist Economics' in a *Survey of Contemporary Economics*, vol. 1, published by the American Economic Association and edited by Howard S. Ellis in 1949 (repeatedly republished).

² O. Lange and F. Taylor, *On the Economic Theory of Socialism* (Minneapolis, 1938).

³ E. Barone, *Il Ministero della Produzione nella Stato collectivista*, English translation in *Collectivist Economic Planning*, edited by F. A. Hayek (London, 1935).

⁴ L. von Mises, 'Die Wirtschaftsrechnung im sozialistischen Gemeinwesen' (*Archiv fuer Sozialwissenschaften*, April, 1920). His article is expanded in his book *Die Gemeinwirtschaft*, 1st ed. 1922, 2nd 1932. English translation, *Socialism*, 1936.

Like other bourgeois critics of socialism, Mises took advantage of the paucity of socialist literature, seizing upon a highly centralized model based on physical allocation and which was seemingly confirmed in practice by 'war communism'. Although it is true that he allowed for the appearance of a market for consumer goods in socialism, he felt that the inevitable consequence of the socialization of the means of production would be the stifling of a market for capital goods, thus precluding the possibility of a rational control of the economy.¹

Because no production good will ever become the object of exchange, it will be impossible to determine its monetary value. Money could never fill in a socialist state the role it fills in a competitive society in determining the value of production goods. Calculation in terms of money will be impossible.

From this Mises concluded that it would be impossible in a socialist economy to determine the economic efficiency of production or investment decisions. Thus the only form of rational economy—despite socialist accusations that it is anarchic—is one based on private ownership of the means of production and, hence, on universal exchange relations: 'As soon as one gives up the conception of a freely-established money price for goods of a higher order rational production becomes completely impossible. Every step that takes us away from the private ownership of the means of production and from the use of money also takes us away from rational economics.'² Apart from criticisms of both the lack of value criteria and of the impossibility of establishing incentives for management personnel, this is Mises's main argument. Today its primitive nature is evident, not only in the light of socialist experience but also in the light of the development of state capitalism. Nevertheless since then a considerable number of bourgeois economists have followed Mises's arguments (even the reasoning of so serious a scholar as Max Weber, in part, follows the same course in *Wirtschaft und Gesellschaft*).

F. A. Hayek took Mises's solution as the starting point of his own critique of socialism to reach a less drastic interpretation. He showed that Mises's reasoning demonstrates not the theoretical, but the practical inability of socialism to develop a rational economy. Hayek, like Robbins and others, considers that Pareto's argument as expanded by Barone is theoretically correct. Accordingly, the central planning body can obtain the optimum use of means on the condition that it

¹ L. von Mises, 'Die Wirtschaftsrechnung', quoted from *Collectivist Economic Planning*, ed. F. A. von Hayek, 1935, p. 92.

² *Ibid.*, p. 104.

behaves consciously, *ex ante*, and analogously to a perfect market mechanism. However, this planning body would have to take account of all the mutual interrelationships in an economy and would, simultaneously, be obliged to solve a system composed of hundreds of thousands of equations with hundreds of thousands of unknowns. As such it assumes perfect accuracy of data on the number of goods produced, prices, production coefficient, and needs of services. Because, at best, it would seem difficult to fulfil this kind of condition, a rational socialist economy, although theoretically conceivable, cannot exist in practice.

Therefore, the advocates of socialism must try not so much to prove the theoretical possibility of a rational socialist economy, but rather they must try to show that it is possible to construct a mechanism which guarantees optimum decisions when the means of production are socialized and planning is centralized. Fred Taylor, in 'The Guidance of Production in a Socialist State' made the first attempt to produce a solution along these lines. (It is noteworthy that the article had to await publication of Lange's book to make an impact.) A further important contribution is the article 'Price Formation in a Socialist Economy' by the English economist, H. D. Dickinson. Yet it was Abba Lerner and Oskar Lange who made the most important contribution to the inter-war discussion through a series of articles (in part a mutual polemic) in the *Review of Economic Studies*.³ Lastly our summary must note a certain similarity to the Lange-Lerner solutions in earlier but less precise German works.⁴

For the purposes of the ensuing review of the period it will be sufficient to extract the most representative of these studies and to use it as an example in considering the proposed mechanism of the functioning of a socialist economy. As that representative the best choice is Lange's work in its final version and as subject to modification by the comments of Lerner (hence the frequent allusions to the 'Lerner-Lange solution').

Briefly the argument runs as follows: in order to solve the problem of managing the factors of production, what is required is not prices in the narrowest sense (the actual exchange relationship between two commodities on the market) but in the most general sense (an index of choice alternatives). Hence the prices to be used for allocating

¹ *The American Economic Review*, 1929.

² *Economic Journal*, 6/1933. Dickinson's book, *Economics of Socialism* (1939), seems to be less clear than his article.

³ Lerner in years 1934-7, Lange in years 1936-7.

⁴ E.g. C. Landauer, *Planwirtschaft und Verkehrswirtschaft*, 1927, E. Heinemann, *Sozialistische Wirtschafts- und Arbeitsordnung*, 1932; H. Zassenhaus, 'Ueber die ökonomische Theorie der Planwirtschaft', *Zeitschrift fuer Nationalökonomie*, 5/1934.

factors must not be established by actual exchange among various owners but must be ones calculated by the central planning office. (The former alternative based on the private exchange of producer goods is excluded by the nature of socialism and social ownership of capital.) The centrally calculated prices are parametric in so far as managers of socialized enterprises cannot influence price determination, but, on the contrary, are given prices by the central planning office as a basis for their own decision-making. If it is the case that such prices are not arbitrarily established then the problem is at an end. Given the following assumptions which are not at variance with the principles of a socialist system, objective price structure can be constructed:

1. There is freedom of choice in the consumer goods market; with given incomes, the prices of these goods will establish themselves as equilibrium prices similar to those of a competitive market.

2. There is freedom of choice of occupation and place of work which in the same way tends to establish an equilibrium in the labour market.

3. There are established principles for the distribution of income among members of society; here arbitrariness is limited by the assumption of a labour market.

4. Managers act according to definite principles: a. the minimization of the average cost per unit of output; b. regulation of production of output to the point where marginal cost is equal to price. Consequently marginal rates of substitution will be equalized.

5. The rate of accumulation is directly established by references to the central planning office; while the allocation of capital to branches of production and to enterprises is achieved by using a rate of interest which equalizes the demand for and supply of capital.

On these assumptions, price is the single determinant of the supply and demand of not only consumer goods but also of producer goods. 'The conditions of equality between supply and demand determine a set of equilibrium prices—the only one guaranteeing the consistency of all decisions.' Equilibrium prices—and hence, not arbitrary ones but such as are objectively determined by the whole set of complex interconnections—are achieved by trial and error (successive approximations). Far from requiring the simultaneous solution of hundreds of thousands or millions of equations, what is needed is the observation of the movement of supply and demand. This movement, of course, is the independent result of the decisions of consumers and managers constrained by the general conditions listed above. Successive approximations, raising the price of goods or services in short supply and lowering those of goods in the opposite situation, allow the central planning office to obtain an equilibrium price structure.

In this summary of Lange's views I have omitted the problem of the criteria for establishing objectives of the central planning organ and the definition of the optimum allocation of available factors (for the latter we must have a standard of evaluation). These interconnected difficulties, long the intensive subject of welfare economics, are related to the principle of consumer's sovereignty—which amounts to the adaptation of the composition of production to consumer preferences expressed as effective demand. Lange, at first, included this principle in the foundations of his socialist system. Later, expanding his theory, he showed that the procedure for achieving price equilibrium by the use of successive approximations can also be applied when production is adjusted not to consumer preference scales but to a specific scale of preferences set by central planners.¹

Theoretically this thesis arouses few outcries, for when given preference scales are assumed, it is possible to say that by trial and error optimum allocation can be achieved in line with those preferences. In the abstract it is possible to agree that the economy in the assumed conditions will tend towards the situation which Lerner describes thus: 'If we so order the economic activity of the society that no commodity is produced unless its importance is greater than that of the alternative that is sacrificed, we shall have completely achieved the ideal that the economic calculation of a socialist state sets before itself.'² Obviously this idealized picture of the equalization of marginal rates of substitution does not correspond to any economic reality. It is, however, further removed from reality (even as a tendency) when the specific preferences of the central planning body are decisive than when the consumer is 'sovereign'. Such an abandonment of reality, it seems to me, is related to the extreme decentralization of Lange's model. He tries to show that the socialist system is able, at least as well as capitalism, to achieve what is described as the

¹ Lange correctly distinguishes between consumer's sovereignty and freedom of choice in the market for consumer goods. 'But freedom of choice in the market for consumer goods does not imply that production is actually guided by the choices of the consumers. One may well imagine a system in which production and allocation of resources are guided by a preference scale fixed by the Central Planning Board while the market prices are used to distribute the consumer goods produced. In such a system there is freedom of choice in consumption, but the consumers have no influence whatsoever on the decisions of the managers of production and productive resources' (O. Lange and F. Taylor, *On the Economic Theory of Socialism*, pp. 95-6). It is quite clear, in this case, that the price structures of marketed consumer goods and the prices paid to the producers (and hence the price structure of producer goods) must be separated from one another, e.g. by a system of taxes and subsidies.

² A. P. Lerner, 'Statics and Dynamics in Socialist Economics', *Economic Journal*, 1957, 47, p. 253.

optimum in the conceptual apparatus of 'welfare economics'. He points out that it can, perhaps, do it even better, thanks to the accurate information in planners' hands concerning the situation in the entire economy. In Lange's model the central planning board differs from the market only in that it prescribes the rate of accumulation and puts into practice the principles of income distribution. In all its other functions in accordance with the rules established for managers it merely replaces the market. The suitability of this model is more for controlling output under pressure from direct reactions of the 'sovereign consumer' than for controlling output under the influence of separate overall social preferences. Hence doubts arise as to the universal applicability of the theory.¹

The most noteworthy achievement of Lange and the other participants in the discussions which led to the competitive solution was to show the baselessness of the assertions of Mises, Hayek, Robbins, etc., that rational economic calculation under socialism was impossible. This does not mean that Lange's and Lerner's articles of that period went unchallenged. However, their opponents refrained from repeating old arguments, attempting instead to put forth new ones often on a completely different basis. Hayek, for example, attacks Oskar Lange and Dickinson,² not by opposing their general line of argument but by concentrating on questioning the possibility of organizing quasi-competitive conditions without private ownership. The weakest points he uncovers are the difficulty of separating independent productive units where there are strong central preferences; the question of incentives for lowering costs of production; the state of official entrepreneur dilemma with regard to the position of the director of production who is obviously not in a position to bear actual material responsibility for the consequences of his decisions. Another general set of criticisms hinges on the question of how far practically it is possible for the central planning authority to fulfil the role of the market (this is a question of the speed of reaction to changed conditions).

It is not my intention to minimize the importance of such criticisms. Practice has shown no simple solutions to the marginal autonomy of the enterprise from the centre, no greater results have been obtained for the problems of criteria, incentives, and managerial responsibility. By the light of experience we would certainly be more cautious in judging Hayek's arguments than, for example, Schumpeter. The

¹ Some of the ideas in this section have been developed in chapter 4, especially in the discussion of the criteria to be employed in the choice of investments and their relation to the law of value.

² F. A. Hayek, 'Sozialistische Wirtschaftsrechnung', 3—'Wiedereinführung des Wettbewerbs' in *Individualismus und Wirtschaftliche Ordnung* (Erlenbach-Zürich, 1952).

latter replies affirmatively to the question 'can socialism function?' on the basis of arguments put by the advocate of the 'competitive' solution. As evidence of the possibility he points to the behaviour of corporate managers.¹ On the other hand the difficulty in developing satisfactory managers—a group mandated by society to manage production—is among the negative results of the underdevelopment of capitalism in Poland. (In this, Poland is not unlike the majority of other contemporary socialist countries which have had insufficient (or poor) experience in operating state-owned or corporate enterprises). It is unquestionable that the high degree of separation of the function of management from ownership visible in contemporary capitalism constitutes a basic material precondition for socialism; the more so in the setting of the development of various forms of state capitalism.

Independently of actual present situations where the obstacles foreseen by Hayek may cause some difficulties, they form no insuperable barriers to ensuring economic effectiveness. (It is also assumed that the conditions necessary for this end are fulfilled.) That Hayek and Mises were aware of the insignificance of these arguments is witnessed by their later shift from proofs of the economic inefficiency of socialism to purely political criticism concerning the relationship between planning and individual freedom. Bergson, generally very careful in his formulations, writes that 'it must be conceded, too, that the emphasis that the critics of socialism have lately placed on this issue [planning and freedom] sometimes has the appearance of a tactical manoeuvre, to bolster a cause which Mises's theories have been found inadequate to sustain.'² No more need be added to this.

Leaving aside many other notes and comments of varying importance we shall pass now from consideration of the 'competitive solution' to consideration of criticisms of our theme from those whose positions we could constitute as the 'left'. These are the Western Marxist economists who base their positions on the planned socialist economy as it emerged during the inter-war years in the Soviet Union. Included in this group are Maurice Dobb,³ Paul Baran,⁴ Paul Sweezy,⁵ and Charles Bettelheim.⁶ Although they were

¹ J. Schumpeter, *Capitalism, Socialism and Democracy* (London, 1957), chapter entitled 'The Human Element'.

² A. Bergson, *Socialist Economics*, pp. 412-3.

³ A number of his articles were published in *On Economic Theory and Socialism* (London, 1955); see also *Soviet Economic Development since 1917* (London, 1948).

⁴ P. Baran, 'National Economic Planning', Part 3, 'Planning under Socialism' in vol. 2 of *A Survey of Contemporary Economics*, edited by Bernard Haley, 1952.

⁵ Paul Sweezy, 'Socialism', *Economic Handbook Series* (New York, 1949).

⁶ Ch. Bettelheim, *Les problèmes théoriques et pratiques de la planification* (Paris, 1946).

not entirely in agreement with each other, I will concentrate on one, Dobb, who immediately and vigorously took up the cudgels against Lange. In part I also want to take up an article by Baran and to return later to some problems raised by the other two of the quartet.

At the time of NEP when he wrote his first book devoted to the development of the Soviet economy, Maurice Dobb¹ was very close to the views of Dickinson and Lange. However, evidently under the influence of the changes which had taken place in planning and organization of the Soviet economy, he later declared his previous views mistaken. This point is emphasized in one of the footnotes in *On Economic Theory and Socialism*. His doubts about the 'competitive solution' derive from a fear that such a model does not make it possible to show the superiority of the planned socialist economy. More than that, regarding the mechanism, it is at best an imitation of capitalism on the basis of the social ownership of the means of production.

In reply advocates of the 'competitive solution' might state that their model contains two assumptions of cardinal importance which distinguish it from the model of a capitalist economy.

1. the assumption that the rate of accumulation is determined by the central planning authority on the basis of general social preferences, and hence that it guarantees the optimum growth rate. At the same time, this means the elimination of one of the chief causes of cyclical movements in the process of reproduction;

2. the assumption that the central planning authority determines the principles of income distribution—principles based on justice and economic stimulation. This is a basic condition for the socially rational allocation of factors by the market mechanism (a proper structure of consumer demand). As with the above this is also impossible to achieve in capitalism.

However, the advocates of the 'competitive solution' did not reply to criticisms that their proposed model contained internal inconsistencies. Of these the most noticeable is the extent to which it was possible to achieve general social preferences while simultaneously observing the other principles which had been adopted for the functioning of the economy. For example, the model can be questioned on the grounds that an ideal allocation of factors conflicts with efforts to transform the socio-economic foundations of output and distribution of national income. (This is a very basic problem especially in the transition period when certain sacrifices in production may be required of society in order to transform the socio-economic structure and to achieve a more rapid long-term growth

¹ M. Dobb, *Russian Economic Development* (London, 1928).

rate.) Even apart from this special situation it is doubtful whether that mechanism which guarantees the 'ideal' allocation of means in any given period is also capable of guaranteeing the postulated growth rate.

It is on this plane, that of general economic equilibrium, that Dobb offers many of the criticisms of Lange's model. Put forward as a series of articles on economic calculation in socialism¹ they were subsequently made more concrete by examples.²

Here, rather than repeat Dobb's argument, I would merely like to emphasize his main idea. He feels that it may prove impossible to establish simultaneously the investment rate and use any 'equilibrium interest rate' to reduce the demand for investment funds to desired levels and to allocate funds among users. Simplifying somewhat, we may assume that the magnitude of funds available for investment is equal to the difference between the price of consumer goods and their cost of production. The greater the rate of investment I/Y (where I is investment and Y is national income), the greater is the profitability of the production of consumer goods and hence the greater the propensity to invest. Built into the system there is a cumulative process which makes it impossible to achieve equilibrium at the rate of interest previously assumed.

This difficulty can be overcome by the introduction of a tax (on turnover) which will limit excessive profits resulting from an increase in the investment rate or by the introduction of subsidies when there are deficits. However, to Dobb, this procedure is very complicated especially since it may be necessary to differentiate the approach for different branches. Thus, if the demand and supply of investment funds is not automatically equalized, and if special methods of balancing are complicated and fraught with the probability of error, would it not be better to abandon attempts at influencing management indirectly and to allocate the funds directly through the central authority and thereby to ensure realization of social preferences? Dobb argues further against decentralizing investment decisions by holding that individual enterprises are too limited in their scope; they are unable to appreciate society's point of view in assessing the merits of a decision and they are incapable of making the proper allowances for the time factor. (The types of decisions which come up for special mention are those dealing with the division of investments between departments 1 and 2—investments in capital which produces investment goods (1) and in capital which produces consumer goods (2). Within each of them he alludes to decisions about scale of enterprises, the number of units in each branch, and their location.) He

favours centralizing decision-making because of the need to make co-ordinated calculations for the whole complex of investments, and in this shows a special lack of faith that the trial and error procedure can be applied to a long-term rate of interest given a considerable time-lag between the decision and its effect.

In the article of 1939 Dobb points out that unlike investment decisions, decisions concerning current problems of production can under certain circumstances be decentralized.¹

Even if all questions of investment were decided (or had to be finally sanctioned) centrally, questions of class 1 above (the volume of output from a *given* plant) might still be settled according to Dr. Lange's and Mr. Lerner's rule; i.e., of equating $M.O.C.$ (marginal operating cost) with price. This would mean that 'short period' questions could be decentralized; i.e., day-to-day decisions about the intensity of utilization of plant, and as much adaptation to unforeseen circumstances as would be possible . . .

Admittedly Dobb indicates a number of difficulties in decentralizing day-to-day decisions but ultimately, he feels, they can be overcome. It is apparent how his view corresponds to the trends of development in the Soviet system of planning at that time.² Moreover in an article published in 1953 entitled 'Review of the Discussion Concerning Economic Calculation in a Socialist Economy'³ he goes even further in the direction of centralization. Briefly his arguments are as follows:

1. A decentralized model involves recognizing the principle of consumer's sovereignty. However, the unconditional adoption of this assumption is incorrect (though important, the consumers' desires are neither the only nor the most important factors) because of a. the frequently irrational behaviour of consumers on the market, b. the necessity of earmarking a certain amount of income for communal consumption, and c. a factor recently of increasing importance, the simple conventional origin of some needs ('keeping up with the Joneses').

2. The justification for using a decentralized decision-making mechanism is largely based on the premise that only in this way can the number of possible alternatives involved be lessened. Concentrating all decisions in the hands of the central authority confronts it with the problem of choosing among an enormous number of complicated alternatives which in practice makes rational procedure impossible. On the other hand, such an argument depends on the

¹ M. Dobb, *On Economic Theory and Socialism* (London, 1955), pp. 34-41.

² *Ibid.*, 'A Note on Saving and Investment in a Socialist Economy', pp. 41-55.

¹ M. Dobb, *On Economic Theory and Socialism*, pp. 102-3.

² M. Dobb, *Soviet Economic Development*, p. 378.

³ M. Dobb, *On Economic Theory and Socialism*, pp. 104-70.

assumption of the classical theory of equilibrium in which the number of possible choices is infinite, while the ability of resources is absolute, i.e. the function is continuous. In reality, however, discontinuities can frequently reduce the number 'of alternative positions or allocation patterns from which the planner can choose', and he lists some causes of 'discontinuity'. a. the appearance of bottle-necks; b. the relative stability of technical coefficients of production, due, among other things, to the increased specialization of the factors of production; c. complementarity in the supplies and demands of both capital and consumer goods; d. sudden spurts in the demand for durable consumer goods as a result of equalizing incomes under socialism. ('Where there are no large inequalities of income, the market demand for a thing is likely to be negligible above a certain price level and then highly elastic within the neighbourhood of that price . . . The practical consequence will be that no intermediate position may be practicable for planning between not putting the commodity into mass production at all and producing it on a very large scale indeed'.)¹

The significance of this is that the central planning body does not confront a plethora of relatively minor problems which it is incapable of rationally resolving. Rather it faces a comparatively small number of major problems, and these few can be most rationally dealt with centrally, because the interests of the entire economy can be considered. This facet of the problem is sharply stressed by Paul Baran, who denies that the discussion of the optimum allocation in socialism has any theoretical value at all. 'In the advanced and backward countries alike, the problem facing the Board would be not slow adjustments to small changes—the main pre-requisite analysis—but choice among few technological alternatives involving large indivisibilities and fixed coefficients. Attempting to cope with such perplexities, the Board would look in vain for guidance to the literature on socialist economics.'²

¹ *Ibid.*, p. 85.

² P. Baran, *National Economic Planning*, p. 385. On the other hand, Baran adds: 'At the peril of some oversimplification it may be said that the Board would permit consumer's preference to determine the composition of output within the Board's relevant "priority classes" . . . It goes without saying that most of these problems [the limitation of the effect of consumer preference on production] disappear or lose much of their urgency as soon as the Board's autonomous programme has accomplished its purpose . . . Loosening the Board's priorities schedules, this development would, at the same time, widen its "priority classes"—in other words—increase the area of the Board's indifference with respect to the allocation of resources. Where the Board's "autonomous programme" was small from the very beginning, where—in other words—developmental requirements loomed less large in the early stages of economic planning, the transitional period would be accordingly shorter and

The tremendous import of these condensed arguments is to put in relief the weaknesses of a model which assumes that it is possible to attain automatically optimality in the refined, if somewhat unreal sense, intended in 'welfare economics'. In fact, literally interpreted, Lange's model does not provide the most favourable conditions for utilizing the potential elements in socialism which make it superior to capitalism. The adoption of the frame of reference dictated by Mises and Hayek had the virtue of making it possible to oppose basic theoretical criticisms but was less favourable to the development of practical solutions. Especially for investment, the market or quasi-market process of achieving equilibrium by trial and error has an extremely limited application. In that area it threatens to eliminate such valuable elements of a planned socialist economy as the possibility of determining the effectiveness of investment from a general social point of view, of a high concentration of investment outlays, and of direct co-ordination of decisions.

The argument between the critics and advocates of the 'competitive solution' prompts the philosophical reflection that no discussion should resemble a duel in which the only aim is the defeat of one's opponent. If we accept most of Dobb's argument, it is impossible not to notice some basic weaknesses which can only be eliminated by adopting some of the elements of the decentralized model. At this point I would like to give some important examples.

1. We confront difficulties in ensuring a uniformity of reproduction processes and this is related in turn to the proper organization of restitution investments and in smaller, secondary investments. Here it is difficult to expect an appropriate solution with strict centralization of decision-making, especially when the economy has achieved those overriding priorities to which all else was subordinated. And if, even to a limited extent, some decentralization even of investment decisions is necessary, a price structure becomes an indispensable instrument of proper allocation.

2. Although it is difficult to assume an infinite number of alternatives (especially for key problems) one cannot agree that the actual number is so limited that no difficulties are created for the central planner.

simpler' (*ibid.*, pp. 386-7). These assertions, although there is a great deal of truth in them, cannot be entirely reconciled with the description (cited above) of the problem with which the Board is faced 'in advanced and backward countries alike'. The sequential division would seem to be somewhat mechanical: in fact both types of problem are always interconnected, although not always to the same degree. Finally, Baran seems to connect the possibility of decentralization exclusively with 'the area of the Board's indifference' without perceiving the possibility of realizing general social preferences from a given system of decentralized decisions.

Practice indicates an enormous number of daily problems which cannot be solved effectively at the centre. This holds not only for problems of adopting the supply structure to the structure of consumer needs but also of the choice of productive techniques used to satisfy the desired supply structure at the lowest cost.¹

3. Although Dobb rightly stresses the advantages of *ex ante* adjustments as opposed to those made *ex post*, he overlooks two considerations. First, *ex ante* decisions are not necessarily synonymous with direct decisions (obligatory planned targets). Such a non-direct change is one in which changes in the price structure improve profitability and thereby leads to an increased supply. Second, *ex ante* decisions are neither always possible nor always correct. If either of these is the case a decentralized mechanism of adjustment yields more advantages than a system in which the necessary corrections must be made by the central planning board.

4. In all Dobb's arguments there seems to be the tacit assumption that the whole problem of management in socialism is reduced to making the optimum decision. Problems of decision-making, the efficiency of enterprises from society's point of view, and of incentives, are neglected. This is so, even though for management purposes an examination of the part played by prices and other economic instruments and a study of the respective spheres of decentralized versus centralized decision-making is absolutely indispensable.

In these few remarks I do not claim to have the answer for those problems to which the entire book is devoted. My concern is merely to indicate that the problem is far more complicated than either of the alternative presentations examined hitherto. Moreover, today both representatives of Marxist thought whose views have been outlined here recognize these complexities. As much of his present work manifests, Oskar Lange is far from overrating the possibility that a

¹ It should be noted that both Dobb and Baran seem to understand substitution in its limited sense as the technical substitutability of factors. It can also be understood in a broader economic sense, e.g. as the choice between alternative possibilities of reducing outlays. Even when there is no choice between the use of steel and the use of aluminium (i.e. when it is technologically necessary to use steel for the production of good A and aluminium for the production of good B) there always exists a practical problem of the choice between steel and aluminium in the sense of establishing the relative efficiency of economizing in the use of one or the other of these materials. In this sense substitution is practically unlimited, and the problem of equalizing marginal rates of substitution (not, obviously, in textbook form) appears in a new light. From this point of view the importance of the price structure is undoubted. On the other hand, the technical coefficients of production can be altered, among other things, by changes in relative prices. In this case to assume that the coefficients are stable is less than agreed upon. (Edward Taylor has drawn attention to this, though in a different context, *Teoria Produkcji (Theory of Production)*, Warsaw-Lódź, 1947, p. 354.)

socialist economy could function automatically, especially with regard to investment. Maurice Dobb has also adjusted his stand in view of the experiences of a planned economy and of recent theoretical discussions. He has recognized that he was, perhaps, too severe in his criticism of decentralized projects¹ and is more concerned than ever with the problems of the law of value and prices in a socialist economy. That is not to imply that all differences of opinions have disappeared. However, the signs of a growing agreement are there and it is with considerable satisfaction that we note them.

Jumping forward in time from the inter-war period to the present we must, at least, allude to the fact that post-war non-Marxist literature is very little concerned with the question of economic calculation in a socialist economy. At most, it is interested in the usefulness of applying one form or another of this calculation and with the assumptions on which it ought to be based. An illustration is the international symposium on the subject of 'Economic Calculation and Organization in Eastern Europe' organized by the University of California at Berkeley in June, 1958.² Not one of the papers presented there dealt with the Mises-Hayek problems, although, from different positions, they are all interested in the examination of the methods of calculation applied and the lines of discussion followed in socialist countries.

The reasons for this shift of emphasis are not difficult to find. They issue from the eloquence of the economic experience of the socialist countries and from the changes which have led to an increase in the economic role of the state in some capitalist countries. It is not my whole intent, in noting this, to rouse a sense of satisfaction among us, socialism's supporters, I would like also to indicate that we are faced with a new situation. More now than ever, it is necessary for us to study Western writings on economic planning, especially since we have become concerned with many problems of the functioning of a socialist economy which we did not deal with hitherto.

Soviet economic discussions in the 1920s and the functioning of a socialist economy

For obvious reasons one would expect to find the most important contribution to the solution of the problems of the functioning of a

¹ See his article 'Uwagi o roli prawa wartości w gospodarce socjalistycznej i systemie cen' ('Remarks on the role of the law of value in a socialist economy and on a price system'), specially written for the Polish edition of M. Dobb's book *On Economic Theory and Socialism*, pp. 452-68. See also 'A comment on the discussion about price policy', *Soviet Studies*, vol. no. 2.

² The papers were published in *Value and Plan*, edited by Gregory Grossman, University of California Press (Berkeley and Los Angeles, 1960).

socialist economy being made by Soviet economists. As a result of the October Revolution, they were able to work in a marvellous 'laboratory' and obtain first-hand experience in the working of a planned economy. Yet much remains to be accomplished before it will be possible to appraise fully the economic discussions which took place in the 1920s and early 1930s. It has been difficult (at least, until recently) to gain access to works published in the period, and little reference was ever made to them in current publications. True, signs seem to indicate that the situation will improve gradually,¹ but for the moment we are still in the early stages of reconstructing this important and unusually interesting period in the history of the Marxist economic theory of socialism. From these circumstances arise the reservations we must make, initially, regarding the fairness of the analysis concerning the past. Shortly we would expect a fuller appraisal of the literature as a closer study of archives progresses.

The studies and results of discussions during this period are to be found not only in academic but also frequently in political practice and official economic actions. Party and state documents frequently contain materials of prime importance. Apart from that, even in the best theoretical writings, we sense a close connection with the pressing problems of actually building socialism. (Among the few exceptions are the scholastic discussions on the works of Rubin.) Deep involvement is witnessed both by the choice of questions discussed and the acerbity of subsequent exchanges. The latter not only did not try to avoid the political consequences of a theoretical position but were aimed at laying them bare. (It is obvious that I am thinking of the work of Marxist economists at the time universally termed Communist to distinguish them from bourgeois economists in the university faculties and economic institutions.) Politically sharp as they were, the discussions were characterized by a great freedom of opinion, originality, and factual argument. This is in contrast to the later period when a political argument was used as a proof of condemnation and was final in any controversy.

In the foregoing it is not meant to imply that disputants' positions were reached without certain *a priori* assertions which were rather difficult to oppose. Among these untested assumptions was the one which held that there was a contradiction between socialism and a commodity economy and between every form of plan and market. Communist economic thinking, especially just following the Revolution, was dominated by the conviction that the progress of building socialism was inseparably linked with the unfolding of a system of

¹ Another sign is to be found in the republication of several works from this period, e.g. *Na planovom fronte* (Moscow, 1958), a collection of Strumlin's articles.

physical allocation. Thus, under 'war communism' (and even later), practical attempts were made to solve the problem of direct calculation in labour units by the so-called reduction method (the reduction of complex labour to simple labour).¹ Here, too, can be found the roots of the early attempts to treat hyper-inflation, during and shortly after the Civil War, as a process of eliminating money. As such, it is a concept which seemed to agree with the corresponding point in the programme of the Russian Communist Party.²

With the transition to the New Economic Policy the circumstances in which the theoreticians worked were slightly altered. The need arose for a theoretical study of the role of market links between town and countryside and of the effects induced by the revival of a money-commodity economy (*khozraschet*), in the socialist sector itself. Analyses of market processes and the resultant conclusions for planning were important both in economic policy and in theoretical work.

The first signs of change in Marxist views toward market-plan relationships came when the idea of their mutual negation transformed itself among some circles into the conception of the market as a special kind of planning mechanism. The system of physical allocation 'war communism' was no longer generally treated as an economic synonym for paradise, lost.

In the discussion aroused by Preobrazhenski's book (cf. *infra*) Pashukanis, a prominent lawyer and economist, emphasized the importance of using value forms. Failure to employ them would lead to a reversal to such unpopular and ineffective economic methods as compulsory mobilization of labour, allowing no freedom of movement for workers in their jobs, rationing, etc.³

G. Sokolnikov makes some interesting comments on the part to be played by money. As a specialist in monetary policy and long-time Commissar for Finance he wrote:⁴

By itself money bears a certain right to choose goods on the market for everyone who possesses it... This freedom of choice on the market is absolutely necessary for the small (commodity) producer. To what degree is it indispensable for the worker, and were we correct in going over to this form of freedom from coercion which existed during the Civil War? I think so. Trying to

¹ See, for example, E. Varga, 'Reckoning of the Value of Production in a Moneyless Economy', *Ekonomicheskaya Zhizn*, no. 259, 1920, which provoked much discussion.

² See above, pp. 15-16. Some typical statements on this subject are quoted by Dobb in *Soviet Economic Development since 1917*, pp. 121-2.

³ *Vestnik Kommunisticheskoi Akademii*, no. 14, 1926.

⁴ G. Sokolnikov, 'O korenykh voprosakh denezhnogo obrashcheniya v perekhodnyy epokhu', *Sotsialisticheskoye Khozyaystvo*, no. 5, 1925.

organize the economy so much that the consumption of each human unit is regulated compulsorily is to set oneself an essentially incorrect task and, for the present, one which is quite unfeasible. The regulation of consumption must be carried out in a different manner—a much more complicated manner—through wages and price policies, etc.

I. Smilga puts the problem even more generally:¹

What does the principle of *khozraschot* mean? It means economic management in order to obtain the maximum effect for the minimum of outlay. In theoretical terms it means the restoration of the operation of the law of value, constrained by a series of specific orders issued by the state. . . . The law of value can be compared to a machine gun which serves the man who fires it. To attempt to treat the law of value and planning as mutually exclusive factors is no less than an attempt to reopen the problem of plan and market, which has already been settled in practice in the conditions of the New Economic Policy.

Not only can there be found opposition to using administrative measures² in Soviet literature of this time, but there are even attempts to give a general description of socialist economy based on economic motives³ and stressing the need to preserve marked equilibrium in planning.⁴

On the basis of the fragmentary materials available it is hard to say whether, and to what degree even these writers extended their outlook to the socialist economy in general. Did those who were emphasizing the market as an instrument of a planned economy limit themselves only to the multi sectoral (public and private) transitional economy? Perhaps, the last alternative is best supported by the documentation cited above. At any rate some of the chief representatives of the old guard Marxist economists stubbornly clung to this view supporting the physical allocation used under war communism, Lev Krizman, the author of a comprehensive monograph on war communism, wrote:⁵

¹ Smilga, 'Plat let NEPa', *Plannovoye Khozyaistvo*, no. 2, 1926.

² 'Where *khozraschot* is employed, administrative means of influence are by no means the best', A. Mendelson, 'Plannovaniye promyshlennosti', *Plannovoye Khozyaistvo* no. 3, 1926.

³ Every economic organization ought to find itself in an economic environment such that by the exclusive pursuit of its own advantage it will fulfil the will of the economy as a whole. Y. Repshin, 'Nashi ekonomicheskiye problemy', *Plannovoye Khozyaistvo*, no. 2, 1926.

⁴ V. Novozhilov, 'Nedostatki tovarov', *Vestnik Finansov*, no. 2, 1926.

⁵ I. Krizman, *Gerovicheskiy period Velikoy Russkoy Revolyutsii. Opyt analiza tak nazivayemogo voennogo kommunizma*, 2nd ed., 1926, p. 177.

War communism was the first large-scale experience of a proletarian economy run in physical terms, the experience of the first steps in the transition to socialism. In essence it was not a mistake made by some people or a class. Rather despite certain distortions and its lack of purity, it was an anticipation of the future, a transformation of the future into the past (a present which already belongs to the past).

The situation was also clearly expressed by Kzhyshanovski, the first president of the Gosplan:¹

Was it intended under war communism to create the outline of a moneyless economy? It is easy to show that there was a clear intention to create such an outline. . . . the transition to free turnover of commodities and to a more or less explicit money economy . . . constitutes a tactical retreat.

Thus, one can say that even in the middle of the 1920s when the area covered by money-commodity relations and the degree to which they were used were at their apex, it was still strongly held that the reasons for the appearance of the money-commodity relation were to be found outside that socialist economy itself and that the 'market' was a synonym for 'spontaneity'. And, although the development of a new socialist-type market as an important element in the operation of the economy did make some headway, it did so only with very great difficulty.

Towards the end of the 1920s, as the first five-year plan went into operation, anti-market views decisively won the upper hand. In practice, all theoretical 'concessions' in this sphere were sharply condemned as everywhere 'planned economy' because equal to direct administrative methods of operation, and the market was just as clearly identified with spontaneity. A 1930 article by Strumilin dealt with this relation between plan and market in the NEP.²

By opening up a certain area for the operation of spontaneous market relations in the name of peace with the countryside, the New Economic Policy had serious and long-term, but no permanent intentions. It was intended, as it became possible to plan the economy more and more fully, gradually but quite consistently to limit the spontaneity of the market until this element had been entirely replaced by planning.

¹ G. Kzhyshanovski, 'K voprosu ob ideologii sotsialisticheskogo stroitelstva', *Plannovoye Khozyaistvo*, no. 1, 1926.

² S. Strumilin, 'Pervye opyty perspektivnogo plannirovaniya' in his book *Na planovom fronte*, p. 247, (italics are in the original).

In dissecting the theoretical views of these Soviet economists, it must be remembered that their negative attitude towards markets derived from practical conditions of that period as well as a particular line of thinking which appeared on the theoretical front. Generally, the practical causes of this attitude towards the market are to be found in the fact that the private sector (including capitalists) contrived to adapt itself to the market better than the socialized enterprises did. To this extent it is fair to say that the market was a spontaneous element hindering the planning activity of the state and the development of socialism.

At the same time, in the theoretical realm, representatives of bourgeois economics came out in defence of the market; views in no way different from those of Mises were expressed by Boris Brutzkus, later an emigrant, who tried to prove the impossibility of having a national economy without a market in his lectures at the University of Petrograd during 1920.¹

Another group of economists, while accepting the Soviet system and a planned economy, advocated an NEP-form of market as an indispensable component of any planning system. Further, they held that market phenomena must be treated as the starting point for determining the aims of the plan, and they held that changes in market conditions must be the most essential element for assessing the fulfilment of those tasks. The stand of this group of economists received a good deal of attention from Strumilin in an article referred to above. Thus, he quotes the following statements of Bazarov from archival material (protocols of the meetings of the presidium and committees of the Gosplan):

Basic assumptions of NEP, i.e. *the existence of a market and khozraschet constitutes the basis of all possible planning*, independently of whether a world revolution takes place or not. Historical experience shows a *healthy interest* in the result of his work. But that is not enough: only the market in the present conditions allows the creation of *an automatic control* of all operations, an automatic meter, showing the results of the operation of each branch of the economy and of each enterprise individually.

¹ These lectures were later included as part 2 of a book by Brutzkus, *Economic Planning in Soviet Russia*, (London, 1935). In 1937, in the Warsaw *Economist*, he published an article entitled 'Plan i rynek w Rosji Sowieckiej' (Plan and market in Soviet Russia) where he describes these lectures as follows: 'The basic ideas of my lectures are the same as those to be found in the critique of natural-economy socialism in the well-known book by the Viennese professor, Ludwig von Mises, *Die Gemeinwirtschaft*, although the author of this article had no access to Western literature as he was living in Russia' (*Ekonomista*, 4, 1937, p. 51).

Groman and Kondratiev, as Strumilin writes, subscribed unreservedly to Bazarov's views.¹

I agree with Bazarov's thesis (says Kondratiev in the same protocol) that the existence of the NEP is *not only not contradictory* to the plan, but constitutes one of its foundations. The market and prices, undoubtedly, constitute a basis for formulating the plan, even if only because, otherwise, we lose all possibility of a commensurate view of economic phenomena.

Obviously it is difficult to judge these views without being able to undertake a more extensive study of the content and context of each of their statements. This may be especially needed as Strumilin's article was written in 1930, hence in the period when there had just been a transition to centralist forms of planning and marked intensification of ideological campaigns in economics. It appears from his article that they made a fetish of the market, proposing the adaptation of the tasks of the plan and the forms of its fulfilment to the current and predicted market situation. Hence they seemed to advocate a *sui generis* supremacy of the market over the plan.

The statements of Kalinnikov, the then director of the industrial section of the Gosplan, also manifest this clearly. 'The production plan should correspond not to the theoretical needs of the state and the population for products, but to their ability to pay . . . This assertion should be recognized as basic, since all departures from it will cause over-production and market crises, with all its consequences in the form of unused enterprises, unemployment, etc.'² The real interrelations appearing in a socialist economy are inverted, but disagreement with this approach to the plan-market problem does not necessitate adopting the conclusion drawn by Strumilin when he denied that it was possible to reconcile socialism with the market.³

In accepting the market as an indispensable basis for all possible planning, we would have to pay too high a price—it would mean relinquishing socialism as a system, since it is incompatible with this basis.

Our subject demands consideration of yet another aspect of the theoretical discussions of this period. This was the long, passionate dispute about the *main regulator of economic processes in the Soviet economy* of that time. True, it was not mainly concerned with the *problems of the mechanism of the functioning of the economy* (and hence the forms of its operation); it dealt chiefly with the content of

¹ S. Strumilin, *Na planovom fronte*, pp. 253-4 (this italics).

² *Ibid.*, p. 257.

³ *Ibid.*, p. 254.

planning and with the character of its proportion between various macro-economic magnitudes such as major sectoral growth rate and type of output and between savings and investment. However, indirectly this particular dispute is very important to our undertaking, since it so closely relates to the theory of socialism.

The core of the debate was a book by Preobrazhenski *Novaya ekonomika*¹ containing a number of theses which were attacked by Bukharin.² The dispute culminated in the several-day debate in the Communist Academy over that chapter dealing with the law of value in a socialist economy. Although, Bukharin did not actually take part in the verbal struggle, an article of his was read as a co-report and during the discussion views very similar to his were expressed by many of the participants.³ Thus Preobrazhenski and Bukharin may be considered the main protagonists in the great debate, and this feeling is reinforced by their respective positions as the most important Marxist economic theorists for the contending wings of the opposition within the communist party; Preobrazhenski was one of Trotski's chief representatives, while Bukharin was the leader of the right-wing opposition.

In relating our discussion to the problem of a socialist model the analyses of commodity trade and the experiences of the contemporary Soviet economy are particularly important. Here our chief source is Preobrazhenski's book and the summary of the discussion in the Communist Academy. Leaving aside problems particular to the USSR of that time (the relative magnitude of private trade, the nature and structure of foreign trade etc.), we note the attempt to differentiate markets on the basis of the types of parties dealing on them and the influence of the state on the exchange processes. Among others Preobrazhenski differentiates:

(1) Turnover between state enterprises, where, he feels, only the forms of commodity exchange make their appearance and the law of value operates exclusively through the labour force and then to an extent which varies directly with the number of wage-goods purchased from private producers and retailers.

(2) Turnover in which the state appears as a monopoly producer, but not as a monopoly seller (mainly where manufactured goods are

¹ Preobrazhenski, *Novaya ekonomika Opyt teoreticheskogo analiza sovetskogo khozyaistva*. Kommunisticheskaja Akademiya, Moscow, 1926, vol. 1, part 1.

² N. Bukharin, 'K Voprosu o zakonnomostyakh perekhodnogo perioda. Kriticheskiye zamechaniya na knigu tov. Preobrazhenskogo "Novaya ekonomika," Prada, 9. nos. 148, 150, 153, 1926.

³ The discussion, together with Preobrazhenski's summing up, was published verbatim in *Vestnik Kommunisticheskoi Akademii*, nos. 14 and 15, 1926. Among those taking part were Stetski, Mendelson, Pashukanis, Motilev, Chernomordik, Rosenberg, Bogdanov and Kritzman.

sold in the countryside). This sphere is controlled by the state, which determines prices, but which must reckon with a structure of demand, considerably influenced by incomes from private holdings. Thus, it forms a 'field of battle' between the new laws regulating economic processes and the law of value, which retains a certain influence.

(3) Turnover in which the state appears as a purchaser (most frequently along with other purchasers and hence not as monopolist). This case applies mainly to the purchase of agricultural raw materials. Here the direction of influence is contrary to previous cases since the basic price ratios are established by the law of value, and state price founded on new economic laws policy can only operate within this framework. (The maximum price—the world market price, the minimum—dictated by profitability.)

(4) Retail turnover in consumer goods (mainly sales to the urban population). Preobrazhenski feels that the operation of the law of value is manifested through the necessity of maintaining equilibrium between demand and supply by price policies. However, price should not necessarily affect the distribution of labour (and hence the pattern of output) in production (e.g. the automatic rise in output where price exceeds value.)

Preobrazhenski's market morphology is striking because he attempts to avoid a schematic reply to whether exchange in the Soviet economy of that time is commodity exchange in its economic content. There is an attempt here to interpret Lenin's thesis that the product of a socialist factory is ceasing to be a commodity (possessed of an absolute monetary value by virtue of the direct and indirect labour input); hence products are part of a process which proceeds in different ways depending on the sphere of turnover. Preobrazhenski's division of markets into different spheres according to the strength of the operation of the law of value, in itself, indicates his standpoint with regard to the question of commodity turnover in the condition of socialist production relations. Directly put:¹

Market relations within the area of state property are by no means the result of immanent laws of development and the structure of the state's economy itself. Market relations are here formal and imposed on the state economy from without, by the form of its mutual relations with the private sector.

It is characteristic that Preobrazhenski differentiates between the operation of the law of value in the sphere of state ownership and in the sphere of co-operative ownership. 'The co-operative sector is considerably weaker than state organs in resisting the law of value.'²

¹ E. Preobrazhenski, Clarendon Press Ed., *Novaya ekonomika*, p. 160.

² *Vestnik Kommunisticheskoi Akademii*, no. 16, 1926, p. 62.

His view that commodity relations within the state-dominated sphere are formal and that this character results from external factors, is interesting since he stated it a quarter of a century before Stalin's similar conception in *Economic Problems of Socialism in the USSR*. It is not at all impossible that we have here the roots of Stalin's theoretical inspiration.

However, Preobrazhenski was more precise than Stalin, chiefly because he attempted to distinguish clearly between the use of money-commodity forms and the operation of the law of value in the strict sense. 'The sphere in which money exchange appears is not identical with the sphere in which the law of value operates.'¹ The book's text and related discussion, show Preobrazhenski and his supporters (Solntsev, Kogan etc.) as concerned with at least two problems:

1. The essential feature of the operation of the law of value is spontaneously, while a socialist economy demands a planned determination of proportions (between the different branches and economic categories of the economy) to the end that even if we use market forms to establish these proportions, the law of value no longer operates.

2. The operation of the law of value is connected not only with the specific method of achieving the proportions within the economy, but above all with a definite content of the proportions. In other words, the operation of the law of value leads (or at least, tends to lead) to equivalence of exchange where price conforms to cost and therefore no surplus for investment is generated. And it is just this which Preobrazhenski feels cannot be tolerated in the Soviet economy, especially at this period. The problem is to obtain exchange relations other than those which would develop as a result of the operation of the law of value. Clearly other types of exchange relations would also involve other proportions in the distribution of social labour and other proportions in the growth of individual branches of production.

Obviously, the second problem is the most important. It is associated with Preobrazhenski's thesis on the law of primitive socialist accumulation, which is in conflict with the law of value in the role of economic regulator in the transition period. The law of primitive socialist accumulation is well known from later references in Soviet literature, in handbooks of the history of the Communist Party of the Soviet Union, and in handbooks of political economy. It became a kind of theoretical symbol of the anti-peasant tendencies of the Troiskies. Undoubtedly, such an assessment of the political content of the law of primitive socialist accumulation is not ground-

¹ E. Preobrazhenski, *op. cit.*, p. 158.

less, especially given the actual conditions of the period. Nevertheless, I feel that the way in which Preobrazhenski's theory was elaborated at the time was decidedly over-simplified, especially if the actual course of later events is taken into account (the extent and way to which the countryside participates in ensuring the needs of accumulation in the USSR). *In toto* his argument goes as follows:

The basic problem of the socialist revolution, especially in backward countries, is the creation of the conditions for economic development on the basis of new productive relations. This means that radical change is necessary in the prevailing relative importance of different branches. To accomplish this task with relative rapidity requires the accumulation of a large supply of means, because the normal process of accumulation, corresponding to market proportions, would be too slow. It is doubtful whether the latter would have been feasible bearing in mind external conditions and the requirements of the socialist rebuilding of the countryside. Hence there is a need to accelerate the process and to enable a 'super-normal' accumulation concentrated in strictly delineated sectors. This process Preobrazhenski describes as the law of primitive socialist accumulation, by analogy to its capitalist counterpart. Obviously, no analogy is to be found in the methods, but in the fact that in both cases normal market processes are not sufficient (too slow) for the triumph of the new relations of production and thus demand special intervention. Conclusion: the law of primitive socialist accumulation requires that exchange be non-equivalent (or not in conformity) and hence contradicts the law of market exchange and *sensu stricto* the law of value.

As we can see, Preobrazhenski is not proposing to discard money-commodity forms. The main issue for him is not forms, but the economic content of exchange relations. The content constitutes a conscious non-equivalence (of value and price), redistributing means in favour of socialist industrialization. It is meant not as a concession but as a norm, a part of the pattern of the period. He openly cites the behaviour of monopolies, and emphasizes the importance of accumulation of the monopoly of foreign trade. In Soviet conditions exporting grain and selling manufactured goods to peasants at a higher price than in the open market provides another instrument for redistributing income.

It would be incorrect to think that this redistribution of income from the countryside to industry is the sole source of accumulation. He credited the importance of accumulation in socialist industry, and with a frankness to be respected, he noted that 'the terrible poverty of the period of war and revolution... became and remained one of the elements of socialist accumulation, in the sense that in the light

of this recent expression, it is easier for working class itself to limit its needs in the years when the task of socialist accumulation is the main one'.¹ Furthermore, Preobrazhenski held one source of accumulation insufficient, since, among other things, the low level of the maturation of productive forces (technological attainments) hinders the growth of labour productivity and the reduction of cost. An additional point of interest here is the remark that some features of the socialist organization of production, which are in themselves advantageous (have a negative effect on the accumulative ability of socialist enterprises). This is a reference to the development of labour protection, social services, the shortening of the working day, the abolition of intensive labour, etc.

From the preceding is derived the necessity of finding considerable means outside the socialist sector, mainly in the countryside. Thus Preobrazhenski feels the chief purpose of primitive socialist accumulation, for planning in the transition period, is to create changed proportions and structure of division of labour different from those that derive from the unimpeded operation of market forces. In this sense the law of primitive socialist accumulation is an economic regulator, but it is not the only one since the basis for commodity production and the operation of the law of value as a regulator in certain areas have not vanished. From this arises the thesis of two regulators and of the conflict between them; the law of primitive socialist accumulation versus the law of value, non-equivalence versus equivalence. These are the basic indications of the main contradiction in this transition period, the contradiction between socialism and capitalism.

Bukharin strongly attacked this theory of two regulators together with Bogdanov, Eichenwald, Pashukanis and to some extent Motilev, though there was never complete agreement among them. In the article mentioned above, 'A contribution to the problems of the patterns of development in the transition period' (later in brochure form) Bukharin advanced his own concept of the regulator. As in the preceding discussion, although Bukharin's theses refer mainly to the transition period, they do contain a number of elements of general significance for the functioning of a socialist economy.

Briefly stated his position goes as follows:

The socialization of the means of production makes it possible to replace the spontaneous regulating mechanism of the economy by a planned mechanism. In the sense of a spontaneous regulator the law of value disappears from the scene as the socialist economic base develops. But the law of value in its material content is something more than a mere spontaneous regulator of private commodity

production. It is the particular historical form taken by the general law of the proportional division of labour in society (or, as it was then often expressed—the law of the proportionality of social labour outlays). Two passages from Marx are cited in this connection, which later in the course of the discussion are interpreted in every conceivable way.¹

No form of society can avoid regulation of production in one way or another, by means of the labour time which is at the disposal of society. However, so long as this regulation is performed not by direct conscious control of society over its labour time (only possible when property is socialized) but by the movement of prices of goods, then everything which you have already stated correctly in the *Deutsch-Französische Jahrbücher* remains in force.

The second passage is from the letter of 11th July 1868 from Marx to Kugelmann:²

Every child knows that any nation which ceased to work for two weeks, let alone a year, would perish. Every child also knows that in order to produce a mass of products satisfying a variety of needs, various and quantitatively determined amounts of joint social labour are indispensable. Hence it is self-evident that a given form of social production can in no way dispense with the necessity of distributing social labour in definite proportions; it can only alter the manner in which it makes its appearance. The laws of nature cannot be done away with. In different historical conditions, only the form in which these laws appear can be changed. Hence in a social system where the interdependence of social labour exists in the shape of private exchange of individual products (the form in which proportional distribution of labour manifests itself is the exchange value of these products.)

Bukharin develops his argument in the same spirit: in socialism the law of value is transformed into a law of the proportionality of society's labour inputs, a universal law of economic equilibrium. The spontaneous division of labour is replaced by a planned division without the capitalist tendency to achieve equilibrium by continually disturbing it. But the material content which was always concealed

¹ Letter to Engels, 8.1.1868, (from Marx and Engels, *Listy o 'Kapitale' (Letters on 'Capital')* Warsaw, 1957, p. 148). In referring to the *Deutsch-Französische Jahrbücher* Marx had in mind Engels' *Outline of Critique of Political Economy* printed in his periodical in 1844. (See Marx and Engels, *Selected Works*, vol. 1). In this essay Engels gives a critical account of capitalist competition.

² *Ibid.*, p. 137.

² *Letters on 'Capital'*, p. 188.

behind the form of the law of value remains; the share of a given branch of enterprise in society's income is proportional to the amount of indispensable labour contained in the products of this branch or enterprise. The plan anticipates these proportions, which in perfect circumstances (one might say in conditions of perfect competition) would be developed as the result of the operation of market forces. As Bukharin states the plan is an anticipation of what would establish itself (*post factum*) if regulation was spontaneous.¹

In asserting that the plan may not disturb the proportionality of the division of society's labour (i.e. that society ought to observe the principle of recompensating labour outlays) Bukharin has a theoretical basis for rejecting the principle of the non-equivalence of urban-rural exchange. It will be recalled that the latter was elevated by Preobrazhenski to the rank of the law of primitive socialist accumulation. Non-equivalence endangers the normal conditions for reproduction in individual branches and enterprises, and particularly farms. For this reason Bukharin finds in Preobrazhenski a symptom of 'economic futurism' which threatens to sever vital links between various spheres of the economy, (chiefly between industry and agriculture).²

According to Preobrazhenski the proletarian plan consists in systematically jolting society out of balance by systematically disturbing the socially necessary proportions between different branches, i.e. a systematic conflict with the most elementary conditions for the existence of a society.

This is a concept of extreme importance in understanding Bukharin and other economists of his period, proponents of the laws of the proportionality of social outlays and hence the equivalence of exchange. One of the basic tasks of a planned economy is to guarantee equilibrium or correct proportions between branches of production and, in addition, between all the spheres of economic life (industry, agriculture, production—consumption, demand and supply structures etc.). To ignore these broadly conceived proportions spells instability. In a later article just prior to the attack on him as the leader of the right-wing deviation, Bukharin wrote: 'Elements of crisis which jar the course of reproduction can be found only in the disturbance of the foundations of economic equilibrium, i.e. they result from an improper juxtaposition of the elements of reproduction (including consumption)'. He continues with the following significant remark: 'the disturbance of the necessary

¹ *Pravda*, no. 150, 1926.

² *Ibid.*

economic interdependences has its obverse in the disturbance of political equilibrium of the country.¹

Again we have here a clearly formulated 'theory of equilibrium' we know from numerous later presentations sometimes of a rather simplified nature. (One of the main oversimplifications was the identification of the concept of equilibrium and the law of proportionality of society's labour outlays with the thesis that the Soviet economy ought to preserve the pre-war proportion between industry and agriculture. This proportion (1:2) was said to correspond to 'the optimum economic conditions of Russia'.² However, this accusation hardly seems justified by an analysis of Bukharin's statements. In an article directed against Preobrazhenski, Bukharin clearly emphasizes that the proportions established under the influence of the law of the proportionality of labour outlays will differ basically from the old capitalistic proportions. (This is primarily because of radical changes in the distribution of the national income, in the demand structure and in the whole complex of conditions which determine the proportions of an economy.) He does not hold that the law of the proportionality of labour outlays fixes immutably some rate of growth which does not allow, say, acceleration. Rather he was chiefly concerned to maintain an equilibrium in the growth process, to ensure what we now call *balanced growth*, Bazarov also focused attention on the question of balanced growth.³

The economic plan ought to solve two cardinal problems which constitute the goal of the plan; determination of the condition of the line of transition from the present system of equilibrium to the future one.

Bukharin yields a similar formulation.⁴ 'The task is to determine the foundations for a proper connection between different spheres of production and consumption, or in other words—the foundations of a moving economic equilibrium.'

Obviously he realized that in the mixed Soviet economy of his time, the process of transforming the law of value into the law of the proportionality of social labour outlays, was only in its initial stage. In many sectors the law of value still operated in its old form favouring the rebirth of capitalism and elements of the plan and elements of

¹ N. Bukharin, 'Zametki ekonomista', *Pravda*, no. 228, (4080) 30.9.1928.

² Among those who interpreted Bukharin's conception in this way was A. Leontiev in his article, 'Zakon trudovykh zatrat, yevometodologicheskiye konmi i prakticheskie sledstviya', *Sotsialisticheskoye Khozaystvo*, no. 5, 1929.

³ V. Bazarov, *Kapitalisticheskiye tsykly i vostoimitelnyi khozaystva USSR*, Moscow-Leningrad, 1927.

⁴ N. Bukharin, *op. cit.* See also the criticism of this conception in G. Glezerman, *Teoriya rimovodity i Marksizm* (in Ukrainian), Kharkov, 1930.

spontaneity were continually at war with each other. Nevertheless he, unlike his principal antagonist, considered that only the form of the operation of the law of value, and not the material content concealed within it (equivalence), hindered the development of socialism. He thought that it was possible and necessary for the socialist state, founded on socialist economic sectors, to utilize the market and the law of value.

Preobrazhenski replied to Bukharin's criticisms at length in the second edition of this book and in the discussion in the Communist Academy.

He doubted whether there was any validity in the statement that the law of value is supplanted as a regulator by the planning element merely because of social ownership. This statement is meaningless if it is not known what is meant by the plan and hence how economic proportions are to be shaped. Bukharin's reasoning on the latter subject, the proportionality of labour inputs, can be considered correct only when the socialist mode of production is completely developed. This eventuality exists not only when new productive relations hold absolute way, but also when the same is true of the new productive forces corresponding to socialism.

According to Preobrazhenski every regulator of the economic system has two functions: (1) the satisfaction of the needs of society in a way appropriate to the given conditions; (2) the self-preservation and development of the system (expanded reproduction of the means of production). If it were merely a question of the former function, the whole problem of planning would boil down to allocating society's labour so that the demands of the law of the proportionality of outlays would be fulfilled (where the most intensive need of the final consumer appeared, there, the relative amount of social labour would be the greatest and *vice versa*). It is the necessity to reckon with the second function which means that frequently specific proportions are required 'which can be formed neither under the influence of the pure form of law of proportionality of social labour outlays i.e. in conditions where production is designed only to satisfy needs.'¹ Again and again this same *leit-motiv* reappears. The chief difference of opinion lies in the proportions which are to be achieved; the question of the mechanism is secondary. Markets and their prices cannot provide indicators sufficient for determining the proportions which are to change the economic structure radically. Today's structure of investment (and hence also the structure of the production of investment goods) must, to a certain degree, correspond to the structure of needs which have not thus far manifested themselves in

¹ E. Preobrazhenski, *op. cit.* Introduction to the second edition. (Moscow, 1926).

effective demand but which are, in part, created by today's investments. For this reason it is not possible to limit planning to the anticipation of the operation of the market; this would be to transform the plan into a *sui generis* instrument of the law of value.

I have attempted to render as true an account of the argument as possible, leaving out all the secondary elements. Although not everything in this discussion is, perhaps, clear to us today, one thing is certain: we have here a consideration of the same problem from two sides. Preobrazhenski devotes his main attention to the acute development problems of Baran's 'steep approach' in which a sudden change of proportions becomes of particular importance. Bukharin, on the other hand, attaches much greater importance to allocation, the correct distribution of social labour, the preservation of equilibrium and the balanced development of every branch of production and consumption. The former concentrates mainly on large-scale investment and primarily on investment in the production of the means of production. The latter is the sphere not directly connected with the current structure of consumer demand and with the market. Bukharin's reasoning clearly emphasizes the fullest possible use of the existing productive apparatus with a more gradual growth of investment and allowing for needs indicated by the market situation. The distance between their ideas has to do with their different approaches to the make-up of class forces (especially the peasantry) and to the speed of reconstruction of socio-economic relations.

¹ The importance of the Preobrazhenski-Bukharin controversy for the theory of the functioning of a socialist economy is found primarily in general methodological conclusions. Although these conclusions are not always explicit in their statements they are implicit in the method which they both employ to deal with the problem—in spite of the profound differences in opinion, they have a largely similar method. Both Preobrazhenski and Bukharin differentiate between the operation of the law of value and the existence of money-commodity forms. Bukharin, for example, in defending the need to preserve equivalence (in accordance with the law of the proportionality of social labour outlays and, hence, with the material content of the law value) did not identify this with the application of market forms. On the contrary, in the long run he foresaw an appropriate solution in directly determined proportions by planning bodies, but so as to guarantee equilibrium on the basis of equivalence. For Preobrazhenski the essence of the problem could be found in non-equivalence as the source of primitive socialist accumulation. (Again, however, this was not identical to abandoning money-commodity forms or commodity exchange as an instrument of redistribution; furthermore, as we have seen from extracts, Preobrazhenski clearly

emphasized the differences between the law of value and money-commodity forms.

This is not the right place to analyse distinctions between the law of value and commodity forms. We only note it in order to deal with it later as one of the essential elements in the theory of the functioning of a socialist economy.¹

We would be underestimating the importance of the Preobrazhenski-Bukharin discussion if we limited its significance for defining a model to this methodological conclusion. Although the chief point of contention was that of the areas of expansion and the proportions of them in the process of reproduction—bearing in mind existing conditions—each of these two concepts ultimately brings us to the question of the mechanism of the operation of the economy. Without a doubt the policy contained in Preobrazhenski, a more violent change of structure and a greater straining of industrial effort, is nearer to the practice of large-scale applications of direct administrative methods of management than the economic policy implicit in Bukharin. I do not intend to judge which concept was correct (such a judgment would be problematical since both contain correct and incorrect elements). I am concerned only to emphasize that there is a certain—though by no means automatic—connection between the content of the tasks of economic planning and the forms by which they are achieved. The latter point is quite clear from statements by each of the authors. In Bukharin's case, while discussing the Five-Year Plan in 'An Economist's Notes', he emphasizes the need for realistic investment targets (especially in relation to available supplies of material and labour) and warns against the consequence of allowing disproportions between the development of industry and agriculture to evolve. ('From the long-term point of view the greatest rate of development is obtained when a rapidly developing agriculture accompanies the development of industry.') At the same time he formulates a series of what we would call today postulates of the model.²

We ought to set in motion the maximum number of economic elements working for socialism. This requires an extremely complicated combination of different forms of initiative—personal, group, mass, social, and state. We have overcentralized everything. We should ask ourselves whether we would not be better to take a few steps in the direction of a commune-state. This does not mean letting go of the reins, since basic decisions and the most important problems ought to be more strongly and much more categorically

¹ See in particular chapter 5.

² N. Bukharin, *op. cit.*

(and thereby more carefully) handled by decisions made at the top. Bodies at lower levels already operate within the strict terms of such decisions, responsible for their own domain. Over centralization in many areas means that we deprive ourselves of additional forces, means, resources, and possibilities. We are unable to employ many of these possibilities because of a multitude of bureaucratic hindrances. We could operate more elastically, with more of the necessary manoeuvrability and with much better results, if, beginning with the individual state enterprise, we were better able to adjust to real conditions. In this way we could avoid making thousands of more or less stupid mistakes which in the end constitute a large total.

The debate broadly outlined here obviously does not exhaust the history of discussions of a model in USSR. However their character was changed in the following period which also marked a turning point in the history of Soviet economic science. The total condemnation of both the achievements and the whole trend of development of Soviet economics up to that time ended many creative and extremely promising theoretical discussions and studies. Traces of controversies on various subjects including the problems of a model should be sought from them not so much in public statements of economists, as in the authoritative pronouncements of political leaders (above all Stalin) who laid down the obligatory interpretation of practical economic measures.

The economic literature of the 1930s and the 1940s was devoted either to particular elements of the existing highly centralized economic mechanism or to general theoretical considerations and interpretations of the system which was taken as given. This derived from the general atmosphere of those times and also no doubt from a broad and deeply-rooted conviction that a planned economy was to be identified with the maximum centralization of all economic decisions. Changes occurred only in the 1950s and then especially after the 20th party congress of the Communist Party of the Soviet Union.

Because of the circumstances of economic theory, the centre of concern about the functioning of a socialist economy shifted to the practical process of the formation and development of a system of management. At the end of the 1920s the practical manner of achieving the general Party line in the struggle for the building of socialism was defined. Above all the rate and methods of industrialization and the collectivization of agriculture were fixed. In the period which followed a system of economic management crystallized,

which basically was to last almost a quarter of a century forming the only known pattern of a socialist economic model.¹

Before recapitulating, one point needs to be made. Irrespective of how this system is regarded today,² beyond a doubt the shaping of the first socialist economy was a contribution of historical importance for the development both of socialist economic practice and of theory, which cannot progress without a reality from which to generalize.

Our brief survey of the theoretical heritage of the principles of the functioning of a socialist economy may be summarized as follows:

The works of Marx and Engels and other Marxist writers prior to the October Revolution provide a number of valuable general premises for a planned economy. However especially because these general conceptions were rather hastily applied to more detailed elements of the functioning of the economy, some of their suggestions have been interpreted as arguments favouring the elimination of all forms of market relations and founding the socialist economy on the principles of in-kind distribution.

Western discussions during the inter-war years not only discredited

¹ The principles of the Soviet system of management were laid down at that time in a resolution of the Central Committee of the All-Union Communist Party (b) 5th December 1929 on the reorganization of industry. This resolution is one normally cited as strongly emphasizing the role of the enterprises ('the enterprise is the main link in economic control'). However, for the enterprise this was a promotion due to the liquidation or severe restriction of the trusts which, hitherto, had been the basic institution in the industrial organization, and had operated on the principle of profitability within the general limits of the plan. The new reform gave enterprises juridical independence but not by any means the breadth of decision-making which the trusts had possessed. The unit immediately superior to the enterprises was then the 'obyedineniye' (Association), which rapidly developed into an administrative organ as it took over the main functions of the old syndicates along with certain elements of economic autonomy. The elimination of 'Associations' in 1934 and the transfer of their functions to the central branch director's offices which served as organs of the Ministries gave formal recognition to this evolution.

The subordination of all aspects of an enterprise's activities to a system of planning directives proceeded concomitantly with the expansion of the directing managerial organs. They rapidly changed from centres of economic policy to centres of operative control. In 1932 the Supreme Council of the National Economy was broken into four industrial commissariats (ministries) which increased to 21 by war's outbreak.

Corresponding to the changes in the organization of industry, the organization of planning and the financial system (unification of the tax system, credit reform 1930-1) were also altered.

² Attempts are made to make an analysis of this kind in chapter 3, and to some extent in chapter 4.

the view that socialist economic calculation is impossible, but in a polemic among socialism's adherents, produced a series of interesting interpretations of the problem of the plan and market and of centralism and decentralism in a socialist economy.

The importance of the Soviet debate of the 1920s lies in the attempts to formulate the economic theory of socialism on Marxist methodological assumptions and in the connection between the problems of building models and economic socio-political practice. It is especially important that the Soviet debate faced the problems of the relationship of the law of value to money-commodity forms, of the plan and the market, of centralization and decentralization etc. Moreover, the way in which these problems were handled demonstrates that they arise directly from practice and are not merely invented by theoreticians.

In general, then, it is fair to say that the history of the functioning of a socialist economy has a great deal to say about the problem. It is worth examining and as far as possible filling the lacunae especially in the Soviet debate. On the other hand, it is difficult to expect these sources to give direct answers to the problems now facing us, since in the past the problems were raised rather than solved.

The point of asserting this truism is to indicate the complete lack of foundation of the accusation that the quest for new solutions in this field is an attempt to overthrow long established maxims of Marxist science.

incentives which undermine instead of strengthening the connection between the interests of the state and those of the individual.

5. Bureaucratization of the state and economic apparatus, which led to all kinds of extremely unfortunate economic and socio-political results.

Finally and most controversially, there were criticisms of the central planning authority for some of its crucial investments, which were felt to be irrational. This could occur because there was no proper system of prices, which made the accuracy of economic calculation inadequate and overburdened central authority with current problems of economic administration.

The views of a significant number of economists (and in my opinion the theoretical criticism of the centralized model and its proposed changes) were founded in the belief that too little account was paid to the role of the law of value in a socialist economy.¹ Such a position (as can be clearly seen from some of the pronouncements in the publications I have just named) did not gain universal support and furthermore, was not even uniformly interpreted by its adherents. Undoubtedly the entire discussion was hampered by too little clarification of even some of the most fundamental elements of the Marxist theory of value in a socialist economy. And this says nothing of the chronic lack of verbal precision.

Therefore a vital condition of progress in discussions of the model is an analysis of the operation of the law of value in a socialist economy and careful definition of several concepts employed in such discussions. This will be mainly theoretical though not lacking in important consequences for practical facets of the problem. Otherwise there is a danger that we shall find ourselves imprisoned in a circle of paralysing misunderstandings which will not only prevent practical, rational solutions but will even make impossible unequivocal definitions of disputed points. Even though this is a subject for which Gladstone's remark quoted by Marx has significance: 'Not even love has made a greater number of men into idiots than brooding on the subject of the essence of money', consideration of this problem is necessary to verify the above inferences about the centralized model which we shall discuss later.

¹ Examples: *Ekonomiści dyskutują o prawie wartości* (Economists Discuss the Law of Value), Warsaw, 1956; *Dyskusja o prawie wartości ciąg dalszy* (Discussion of the Law of Value Continued), Warsaw, 1957; *Dyskusja o polskim modelu gospodarczym* (Discussion of the Polish Economic Model), Warsaw, 1957; W. Brus, *Prawo wartości a problematyka bodźców ekonomicznych* (The Law of Value and Economic Incentives), Warsaw, 1956; the book by H. Fiszel referred to above, *Prawo wartości o polityka cen w przemyśle socjalistycznym* (The Law of Value and Price-Policy in Socialist Industry); and Z. Fedorowicz, *O prawie wartości i rozrachunku gospodarczym* (The Law of Value and Khosraschoi).

4 The law of value in a socialist economy

This chapter will be chiefly concerned with clarifying the following questions: What ought we to understand by 'the operation of the law of value' in its strict sense and to what extent does this law really operate in a socialist economy? Among other things considering these problems ought to make it possible to clarify whether in socialism the existence of money-commodity relations necessarily means the operation of the law of value.

¹ The analysis will not, however, touch on the causes of the existence of commodity production in socialism. Here I will merely draw attention to a point which follows from discussions in the Soviet Union.¹

The vast majority of economists have now discarded the formulation, (one found in my book *The Law of Value and the Problem of Economic Incentives*) adopted after the appearance of Stalin's last work, which held that money-commodity relations within the state sector are the result of the law influencing the socialist production from without. Quite apart from fairly basic differences of opinion on the origins of commodity production and the law of value in socialism, the prevalent view is now, that money-commodity relations are not just some kind of moon-like reflection of external light but are derived from the inherent features of the state form of socialist ownership as well.²

¹ Cf. reports of special sessions on the problem of commodity production and the law of value in socialism: 1 *Zakon stoimosti i yego ispolzovaniye v narodnom khozyaistve SSSR*, report of a discussion organized by the Economic Institute of the Academy of Sciences of the USSR, ed. J. Kironrod, Moscow, 1959. The views of 50 economists including all the best-known specialists in the field are contained in 514 pages. The only fragments of the discussion omitted were those dealing with the relations between the MTS and the *kolkhozi* which ceased to be of interest when the MTS were dissolved in accordance with decisions of the central Committee of the CPSU. 2 *Zakon stoimosti i yego rol pri sotsializme*—a similar report of a discussion organized in January 1958 by the Faculty of Political Economy in the Economic Department of Moscow University, ed. N. Tagolov, Moscow, 1959. I shall refer to these publications as the *Soviet Papers on the Law of Value*, nos. 1 and 2 respectively.

² To avoid misunderstandings, I must clarify my opinion that money-commodity relations may exist in the state sector. This is not the same as asserting the identity of their economic content with money-commodity relations between

General definitions

In approaching the problems considered here I would like to concentrate on the connection between the operation of the law of value and the proportions of the division of society's labour in a socialist system. The problem is very closely related to our understanding of the law of value in socialism and has a basic significance for the model of the functioning of the economy.

In Marxist literature the general concept of the law of value and

different owners (including of course, the co-operative market but also the market for consumer goods and the labour market). Thus I maintain the point I made at the second conference of Polish economists, that it is necessary to distinguish between the transfer of a product from one owner to another and the exchange without change of owner. See my paper 'O roli prawa wartości w gospodarce socjalistycznej' ('The role of the law of value in the socialist economy'), *Ekonomista*, no. 5, 1956, pp. 91-2. The peculiarities of money-commodity relations among state enterprises or between enterprises and state organs are seen in at least two interconnected points: (1) in the process of exchange there is no real redistribution of income; (2) money-commodity relations are not the only means by which the social division of labour (adjustment of the structure of production to the structure of needs) is achieved; there are even cases when they do not fulfil this role at all. K. Ostrovitianov upholds a similar opinion in *Soviet Papers on the Law of Value*, no. 1, p. 2.

Stalin's view, it will be recalled, was that the law of value 'influences production' since 'consumer goods, which are needed to compensate labour input into production, are produced and sold in our country as commodities coming under the operation of the law of value'. (*Economic Problems of Socialism in the USSR*, p. 23).

Literally taken, this theory is obviously inadequate especially as an explanation of the appearance of money-commodity relations within the state sector. However, if it is not treated literally and if it is remembered that Stalin identified a planned economy with the centralized model, then does it contain an interesting and valuable concept of the labour power as a factor linking the peculiar market in the state sector with the markets for consumer goods and labour. As I have tried to show, in the latter money always plays an active part, as far as it is indispensable for adjusting demand for consumer goods or the supply of labour respectively to the structures of consumer goods output and of employment which are fixed in the plan. This link is apparent not only in Stalin's point that consumer goods enter the market which ultimately determines their price and thereby affects the restoration (*restytucja*) of labour power, but it is also apparent since relative costs of production are determined by the amount of labour and relative 'prices' which are also ultimately specified by market means (the labour market). Therefore, there can be no talk of separating the money-commodity relations within the state sector from the market where prices must reflect also conditions of demand and supply. Even when the prices of the means of production within the state sector are reduced to the role of units of account market processes still penetrate 'to within' through costs (assuming given freedom of profession and place of employment). This is even more easily seen when allowance is made for the market in agricultural products and foreign exchange which is not handled here.

its functioning in competitive capitalism are usually interpreted in an unambiguous way. This concept corresponds more or less to that expressed in a Soviet textbook on political economy in the following way: 'The law of value is a law of commodity production; its essential meaning is that commodities are exchanged according to the amount of socially necessary labour used up for their production.'¹

Ignoring the question of what constitutes labour outlay and under what circumstances it becomes a socially necessary one (the problem will not be discussed in this work) one can say that where the law of value operates, the exchange ratios of goods are established by the ratios of their values, i.e. the socially necessary amount of time used up for their production.²

Approaching the problem less generally, viz. for the commodity money economy, the operation of the law of value means that price ratios are determined by the ratios of value. Of course, this is not tantamount to asserting that in every case price ratios are identical with the ratios of value. However, the tendency is in this direction. Bearing in mind these few comments we would define the operation of the law as a continuous tendency towards the adaptation of price ratios to those of value.

Sometimes the general fear is voiced that the definition of the law of value as the law of prices may restrict its meaning to an excessive degree. Paul Sweezy, for example, writes that 'what Marx called the law of value summarizes those forces at work in a commodity producing society which regulate a. the exchange ratios among commodities; b. the quantity of each commodity produced; and c. the allocation of the labour force to the various branches of production... the law of value is essentially a theory of general equilibrium developed in the first instance with reference to simple commodity production and later on adapted to capitalism.'³

Other writers emphasize the tendency of the law of value to reduce individual labour outlays to the socially necessary proportions, to reduce socially indispensable outlays by technical progress and so on. Of course, an analysis of the law of value in a commodity economy cannot be limited to the problem of fixing price ratios. It must comprise not only the elements included in the definition of the law itself, but also a description of its role and its effects in a commodity-type economy. What is important, however, is that the law of value

¹ *Ekonomia polityczna. Podręcznik (Political Economy. A Handbook)*, Warsaw, 1955, p. 104. (The Polish translation is based on the first edition, Moscow, 1954).

² Obviously, here it is possible to talk only of the comparative ratios and not of absolute quantities which cannot be directly measured.

³ P. Sweezy, *The Theory of Capitalist Development*, (New York, 1942), p. 53.

touches different aspects of social reproduction not in spite of, or parallel to price regulation, but through it.¹

For example, take the question of reducing individual labour outlays to those which are socially indispensable. A uniform price for a given commodity (and such a price is created on the market by competition) always means greater gains for those who make smaller outlays. By reducing the uniform price to the level of the socially indispensable outlay (more strictly, by reducing the ratio of price to the ratio of inputs) the law of value allows producers with lower than the socially indispensable level to obtain greater gain while those who have higher outlays have smaller gains. Thus, the law of value 'persuades' producers (I assume we are dealing with producers guided by the motive of money income) to keep within the limits of socially indispensable outlays; drives the incompetent producers from the market; and spurs technical and economic progress.

The law of value appears even more clearly in regulating the output of goods and the allotment of labour power to particular areas of production with which Sweezy deals. The classical mechanism for regulating the social division of labour by tending to eliminate the continual deviations of price ratios from value ratios operates here. I would like to emphasize the word 'eliminate' since what is important for the operation of the law of value is not so much the appearance of deviations but the release of economic springs which reduce price ratios to value ratios. A downward deviation caused by a relative excess of supply over demand at a price corresponding to value *ceteris paribus* causes the movement of a certain amount of social labour away from the production of a given good; an upward deviation leads to the flow of labour towards it because of high profitability. The convergence of price ratios with value ratios is thus inseparable from the regulation of the social division of labour in such a way as to bring about a state of equilibrium (e.g. the balancing of supply and demand at price ratios which reconcile with value ratios). Thus the mutual relationship between conditions of production and conditions of exchange find their reflection in the operation of the law of value, though in the final analysis the conditions of production retain superiority. I feel no proof is needed for the generally accepted fact that in private commodity production (conditions of competition between individual producers) the whole process occurs spontaneously, without possibility of attaining a

¹ Price is a manifestation of the law of value. Value is the law of prices, i.e. a generalized expression of the phenomenon of price.' V. I. Lenin. One more Defeat of Socialism—marginal notes on Struve's book 'Economy and Price', *Works*, vol. 20, p. 205 (Polish Edition).

state of relatively stable equilibrium. This results in economic losses and leads to definite social effects.

The functioning of the law of value in a developed competitive capitalism is modified by the motive of maximizing the return to capital as the direct aim of production. It is manifested, primarily, in the appearance of the category called production price (Marx's *Produktionspreis*) which replaces value in the strict sense as the median of price oscillations. Disregarding the famous 'problems of transformation' (of value into production price) and assuming that the production price really is a modified form of value, the above definition of the law of value may also apply to a situation peculiar to competitive capitalism (a tendency in the direction of the convergence of price ratios and the ratios of production prices). It should be noted that the relative proportions of the division of social labour between branches, which are established in an equilibrium based on production prices, differ from those which would prevail if value were the norm of the median of price oscillation.¹ However, we are not interested in this aspect of the problem; we are exclusively concerned to learn whether the operational mechanism of the law of value (in its modified form) works in a similar, though more complex, way to the one described. The gravitation of prices towards the 'norm' (the level determined by the conditions of production) will occur only along with the regulation of the sectoral allocation of labour by means of a continual interaction of production and exchange conditions. Henceforth the notion of 'the law of value' will be used whether the median of price oscillations is value in the strict sense or the production price as a modified form of value.

Monopoly capitalism changes the situation greatly. Monopolies employ their power to hinder the process of adaptation based on the interaction of production and exchange conditions. Hence in mono-

¹ Strumlin rightly stressed this fact in 'Zakon stoimosti i planirovaniye', *Voprosy Ekonomiki*, no. 7, 1959, although he draws a number of important and highly controversial conclusions from it. He feels that the appearance of the production price and the law of the average rate of profit is not identical to the operation of the law of value which he interprets strictly as the law of the equivalence of goods exchanged or what amounts to the same thing—'prices proportional to values'. Strumlin adopts the view that 'the points at which the law of value has fully realized its demands, with respect to the proportions of production and exchange, are optimum from the viewpoint of economizing society's time and labour outlays'. In so doing he treats equilibrium based on production prices as a continual deviation from the optimum allocation of social labour (another argument against capitalism); and he feels that 'increasing divergences in the organic composition of capital lead unavoidably to increasing divergences of prices from value and in growing disproportions of exchange' (and in production, as follows from his reasoning), pp. 124-5.

developed competitive capitalism

and monopoly capitalism

poly capitalism, due to the activities of monopolies and the development of state intervention, the deviations of price from production price become significant and more importantly are of longer duration (monopoly prices). Obviously the tendency to reduce price ratios to 'normal' production price ratios is not and cannot be completely eliminated since monopoly is never complete and the mechanism of competition, though very distorted, does not cease to function. Thus to the extent that competition succeeds in destroying monopolistic barriers and enables 'normal' changes in the structure of labour allocation, the law of value operates in agreement with its unequivocally defined content.

On the other hand, the non-equivalence of exchange becomes more and more a rule. It results from the strength of monopolies and makes the tendency towards equilibrium lead to patterns of supply and demand different from those of free competition.

The above definition gives rise to the question, whether we can speak about the operation of the law of value at all in monopoly capitalism without serious reservations.¹ Generally Marxist literature does not touch this problem and is instead inclined to speak about modifications of the law of value in capitalism. However, this is not the same thing. Modification implies that the law of value in monopoly capitalism is fully operative and that its form is changed. How can this assertion be justified in view of the obvious non-equivalence of monopoly prices? Here the meaning of the law of value undergoes a metamorphosis. In many works, in which authors begin with the above definition and apply it to competitive capitalism, there is an unexpected transition to a completely different position in analysing monopoly capitalism. The problem of equivalence in the operation of the law of value is ignored and attention is focused on problems like the equivalence of the sums of values and the fall of prices when there is a long-term rise in labour productivity.²

The first of these latter arguments is tautological. In reality the sum of prices can never differ from the sum of the values of all commodities. Changes in the general level of prices are—in given productive conditions—merely the expression of a change in the purchasing power of money, while changes in price ratios lead to a different distribution of value created. The second argument makes a real connection between price movements and increases in labour

¹ Strumilin's formulation is in the above cited article. Similar though less clearly Paul Sweezy, *The Theory of Capitalist Development*, and as well R. L. Meek, *Studies in the Labour Theory of Value*, Chapter 7.

² Cf. eg. *Ekonomika Polityczna, Podrecznik*, p. 314; K. Ostrovitianov, 'Stoimost', *The Great Soviet Encyclopedia*, 2nd ed., vol. 41, and the article 'Zakon Stoimosti pri kapitalizme and monopolnaya tsena' in *Kraski ekonomicheskii stroia*, Moscow, 1958.

productivity (nominally visible only if the value of the monetary unit is assumed constant) but it is a connection of a different type from that enunciated in the prior definition of the law of value. If the connection between labour productivity and the price level in the long run were to constitute the content of the law of value, it would not concern the regulating of the division of social labour; the attainment of equilibrium, etc. Therefore to make this factor of prime importance is little more than a way of admitting that the principle of equivalence of exchange is not (or tends not to be) found in its full form in monopoly capitalism.

Typically, analyses of the law of value in competitive capitalism or as a simple money commodity do not treat as a separate element interrelations between prices and labour productivity. This may happen even though this interrelation appears more clearly than in the monopolistic stage.

There are no reasons for abandoning the idea of applying the general definition of the law of value to monopoly capitalism. On the other hand, as a rule, the equivalence of exchange is distorted here. Then does this fact justify the conclusion that there are, at least, far-reaching limitations on the law of value? Not quite, since a distortion of equivalence may be symptomatic to the violation of an objective economic law, and the economic results may be harmful in themselves. Therefore we must first clarify whether we are dealing with a violation of this law or with the results of major transformations in the economic base which are limiting the operation of the law of value in an objective sense. It is beyond the scope of this book to examine such a problem. However, it seems that the frequently expressed view which holds that many negative aspects of monopoly capitalism derive from disturbances in equivalence, is based on a number of oversimplifications.

A thorough study and clarification of the problem of the operation of the law of value in monopoly capitalism would be of great significance for the theory of value in socialism. Though this view is not a new one, it can be found in Preobrazhenski's book and in Blumin's *Subektivnaya shkola politicheskoy ekonomii* (*The Subjective School of Political Economy*)—unfortunately, even today Marxist literature has made no real progress in its study of the problem.

The formulation of the problem for a socialist economy

In hardly any other theoretical problem has confusion reached dimensions similar to those reached in examining the law of value in a socialist economy. Primarily this was due to a lack of precision in defining the concepts used; in turn the result was an illusory

accord, or difference in point of view. This is true also of my own articles and even of my paper before The Second Congress of Polish Economists¹ which displays vestiges of a bad habit particularly common in this field—the habit of engaging in complex theoretical discussions without previously lending due precision to the terms and concepts used. To some extent I shall try to remedy this now.

To begin with, I think we should finally reject the idea that the mere existence of money-commodity categories is evidence in itself, of the operation of the law of value. This view was first expounded in the article 'Někotorije voprosy prepodavanija politicheskoy ekonomii'—the first, semi-official interpretation of the famous conversation of some economists with Stalin in 1941. It was in the course of this conversation that Stalin, like a bolt from the blue, recognized the operation of the law of value in socialism.² We read that 'the errors of earlier teaching which denied that the law of value continues to operate in a socialist society created insuperable difficulties in clarifying categories like money, banks, credit, and so on in socialism.' Since then many different versions of this view of the operation of the law of value have been expressed. J. A. Kromrod wrote: 'The money form of value is the economic form that is used by a socialist state and which thereby employs the law of value in managing the economy.'³ This quite obviously confused position probably stems from an unwarranted parallel to the classical competitive situation. There, indeed, the mere fact of the existence of money-commodity categories presumes the operation of the law of value, since the mechanism of equalizing the ratios of prices with those of values (or prices of production) functions freely. However, when control over economic resources reaches a degree of concentration such that those who exercise it can effectively influence the whole system of economic quantities, the existence of money-commodity categories can no longer presume the law of value.

(Contrast this with conditions approaching the so-called perfect competition when those who control the factors of production must accept the system as given and adjust themselves to it.) This is true of monopolistic capitalism; it is also true (indeed, to such a degree that it amounts to a qualitative difference) of a socialist economy in which control over the bulk of economic resources is in

¹ W. Brus, 'O roli prawa wartości w gospodarce socjalistycznej', *Ekonomista*, no. 5, 1956.

² No proper account of Stalin's conversations with the economists (in connection with the proposed alterations in the *Handbook of Political Economy*) was ever published. The article cited here, unsigned and later distributed as an offprint to universities as a programme document, appeared in the journal *Under the banner of Marxism*, no. 7-8, 1943.

³ J. Kromrod, *Diengti v socialisticheskom obshchestve* (Moscow, 1954), p. 147.

the hands of the State as founded in social ownership. When the state controls proportions and social production by means of a plan, the appearance of money-commodity categories cannot be defined as the 'utilization of the law of value' if price ratios differ from those of values not accidentally and temporarily, but because of a conscious policy. At any rate, to view any system of prices as proof of the operation of the law of value is to deprive the law of any objectivity; it would not provide any basis, or framework for a national price policy.¹

More concrete is the conclusion, adhered to since the publication of Stalin's *Economic Problems of Socialism in the USSR*, that 'the law of value retains, of course with certain limitations, the role of a regulating factor' in the sphere of the exchange of commodities. Generally this statement is interpreted to require that prices of consumer goods be set at a level which equalizes demand and supply.² Today almost all Marxist economists consider that under socialism, too, the price which does not equalize demand with supply is economically unjustified (at least, for goods sold in a market, i.e. without physical rationing).³ The question arises then: Why is it justified to say that the need to fix equilibrium prices must be a

¹ 'They sometimes call price policy the conscious exploitation of the law of value.' In my opinion this is inaccurate; it is perhaps better to talk about the conscious exploitation of value categories. P. Erdoss, *Tovarnee proizvodstvo i stoimostnye kategorii v socialisticheskom khozyaistve*, p. 100.

² It was this interpretation that I adopted in my paper at the Congress of Economists: 'The role of the law of value as a regulator in commodity turnover is to be found chiefly in adjusting market prices to that level at which demand and supply are in equilibrium.' A similar interpretation is offered by K. Ostrovitianov writing roughly about the same time: 'The operation of the law of value in commodity turnover is revealed in the movement of supply and demand... when the prices of foodstuffs and consumer goods are too high, a commodity surplus (*zatovarivaniye*) arises, when prices are too low—a shortage, etc.' 'Stoimost', *The Great Soviet Encyclopedia*, 2nd. ed., vol. 41, p. 21.

³ This was shown by the Ukrainian Economist A. Kasevina, in her contribution to *Soviet Papers on the Law of Value*, no. 1, pp. 384-7. On the other hand, it is difficult to understand the reservations made by one of the participants in the discussion. A. Kulikov, who begins rightly by stating that price policy must heed the relation of supply and demand. Then he speaks of the need of a non-mechanical flexible application of this principle, taking as examples the establishment of low prices for goods of primary need (especially children's goods, medical supplies, etc.), *ibid.*, p. 99. It is obvious that the state, guided by social considerations, can and ought to set low prices for those goods whose consumption it feels warranted increasing. But this should not violate the principle of a price which equalizes demand and supply since at a low price there ought to be a corresponding increase in supply. In these circumstances it is a question not of lowering a price when it is impossible to buy a commodity but of actually increasing consumption and hence mutually adjusting supply and demand at a lower price.

manifestation of the regulating role of the *law of value* in the sphere of commodity exchange? It is obvious that market equilibrium can be attained also at a price considerably different from the value. Price ratios which equate supply and demand are treated as identical with those of values only by the crudest schools of economic theory. These are the schools which deny any 'internal value' of the commodity and confine themselves only to superficial observation of market phenomena. Equilibrium prices which are set to deviate from values can be regarded as an element in the operation of the law of value only when such deviations induce the convergence of equilibrium price ratios and value ratios by means of changes in the pattern of production.

As Stefan Kurowski writes.¹

This mechanism [the alignment of prices with value] operates as it were in two stages. In the first stage the price of the commodity strives to establish itself at a level for which the demand for a given good is equal to the existing supply. If after the first stage nothing happens . . . there would be no movement of prices towards value. Hence, after this first stage there must be a second stage in the aligning process . . . the producer either increases or decreases the total outlay of labour per unit of production or he *shifts* the existing resources of labour from the production of one set of commodities to the production of another.

Herein lies the crux of the matter. Inquiries into the working of the law of value in a socialist economy usually refer to the relationship between price and value.² However, this connection is described in a very enigmatic fashion as there is commonly a reluctance to define terms and a usage of the least precise definitions in this context. 'Prices are based on value'; 'value forms—price, cost, etc.—should reflect socially necessary outlays, to a greater extent'; 'value constitutes the economic essence of price'; 'a socialist state takes as a point of departure the value of goods produced'—these are typical expressions of the relations between price and value. Moreover, frequently even such a flexible definition is circumscribed by a provision that it does not mean that prices must correspond to

¹ S. Kurowski, 'Demokracja a prawo wartości' ('Democracy and the Law of Value'), *Kierunki*, no. 14, 1956.

² L. Gatowski summarizing a discussion in the Economic Institute of the Academy of Sciences of the USSR said: 'At the base of prices lies value. Very many people now agree to this. It was pleasant to hear many comrades who once rejected the idea acknowledge it now' (*Soviet Papers on the Law of Value*, no. 1, p. 504). I know of no post-war work in which the connection between price and value is directly denied—perhaps Gatowski was thinking of some unpublished statements.

values. In a socialist state it cannot mean this, since there the opportunity provided by the law of value is seized and prices are set to deviate from values in a planned way.¹ Some of Marx's pronouncements are frequently quoted to justify this paradox. He has made statements to the effect that the law of value operates through a continual divergence of prices from values and in particular that 'the possibility of non-equivalence between price and value, i.e. a deviation, is to be sought in the form of the prices as such.' At the same time it is forgotten that these are circumstances in which a deviation of price from value is the medium through which disproportions in the division of labour is spontaneously manifested. The deviation is an indispensable feature which sets in motion the mechanism for realigning of price with value.

In a reference to the possibility of quantitative non-equivalence between price and value Marx emphasized that: 'It is not a defect of this form, on the contrary, it admirably adapts the price form to such a method of production whose inherent laws can only secure expression as the average result of apparently blindly operating irregularities that compensate one another.'²

In this sense the law of value operates essentially through the deviation of prices from values; the inherent law (for this is the ultimate idea) works its way through disorder. But why describe as a use of the law of value the *planned* deviation of prices from values? This is a process which not only fails to set in operation the mechanism aligning price and value but, on the contrary, consciously excludes it. Without the use of sophistry (which is sometimes offered as dialectical argument) it is not possible to answer the preceding question. And it is of no use to observe that deviations do not affect the law of value since the sum of prices remains equal to the sum of values.

In my opinion the reason for the vagueness of the definitions of the law of value can be found in the genuine difficulties of reconciling the law with the tenet that proportions of production in socialism are not based on it but on other economic laws. (At this point it is customary to quote the basic economic law of Socialism and the law of planned balanced growth.) 'The law of value operates, but it is not a regulating factor of production.' This premise is explicit or

¹ One of the participants in the discussion at Moscow University, G. Khudokornov, said quite simply: 'Correct, economically justified deviation of the prices of particular goods is in agreement with the mechanism of the operation of the law of value . . . the limitation of the regulating role of the law of value [in planning price] not only does not conflict with the conception of the use of the law of value in socialism, but directly constitutes its content.' *Soviet Papers on the Law of Value*, no. 2, pp. 193 and 195.

² K. Marx, *Capital*, Everyman, London, 1940, vol. 1, p. 79.

implicit in the enormous volume of printed pages devoted to the problems of that law in socialism.¹ And yet the law as it regulates production requires that all social labour be apportioned among the production of different goods; and it must be done so that the quantities of various outputs produced enable (a tendency towards) the balancing of demand with supply and the convergence of price ratios with the ratios of values. Therefore to deny the regulating role of the law of value and to maintain simultaneously that it operates under socialism is a contradiction in logic. Rejecting or timidly omitting the sole definition which expresses the sense of the Marxist law of value (that price ratios tend to correspond to value ratios) is, of course, not a way of escaping the contradiction. A true escape may take the form of one of three possibilities:

① Either socialist production is totally regulated by the law of value, then we can speak of its validity without qualification.

② Or socialist production is regulated to some extent by the law of value—under certain conditions, in certain branches, etc. Here the thesis which holds that the law operates within certain bounds is maintained. If objective economic conditions do not warrant directing the pattern of production towards a convergence of price and value ratios it cannot be validly argued that 'the law of values is made use of' and 'it operates although it does not regulate'. It is better to say that the operation of the law under given conditions and in a given field, etc. is limited (or non-existent).

③ Or, finally, socialist production is not regulated by the law of value. In other words, there is no need to develop patterns of production in such a way that price ratios correspond to values and a price policy should be based on entirely different premises. In order to be consistent this statement should be accompanied by another assertion that the law does not operate in socialism; this is not to exclude the possibility even the necessity of employing money-commodity forms (some authors use the term 'value forms or value categories').²

¹ In my paper at the Second Congress of Economists I identified the operation of the law of value as the regulator of production with spontaneous regulation and on these grounds denied the regulating function of the law of value in socialism: 'We are faced here with a function of the law of value which is qualitatively different from its function in capitalism.' I think it was right to draw attention to the difference in forms of operation, but this does not solve the basic problem.

² Peter Erdős supports a similar view with admirable consistency not only in title (*Commodity Production and Value Categories in a Socialist Economy and not the Law of Value*) but also throughout the paper in which he speaks always of the employment of value categories and not of the law of value. I made no differentiation of this kind in my paper to the Second Congress of Economists. This was undoubtedly one of the reasons why some critics found nothing more in it than a statement of managing the economy by means of money-commodity

To generalize we could say this: to the extent that the law of value operates, it is the regulating factor of production also under socialism. I have already suggested (in dealing with monopoly capitalism) that the question of whether the law of value operates cannot be answered by mere empirical observation of the actual ratio of price to value.

This is particularly true of a socialist economy where the concentration of economic power is on a scale hitherto unknown.

Social laws differ from natural laws in being mutable. The most brilliant acrobat and the best cosmic rocket cannot defy the law of gravity for a moment. Man, on the other hand, with a certain use of force can behave, at least temporarily, in defiance of social laws. Prices can be maintained which are at variance with the law of value and, given appropriate adjustments in proportions of production or appropriate administrative measures, not even the least symptoms of infringing the normal course of the economy's functioning will appear. If in a given situation it is actually functioning, the objectivity of the law of value ought to reveal itself in harmful economic results; underemployment of the available resources of social labour, both live and 'embodied'; insufficient satisfaction of needs; or succinctly—the impossibility of attaining the situation described in economics as the optimum. Unfortunately, the operation of the law of value and the area covered by it cannot be demonstrated experimentally. That task requires theoretical proof made even more complicated because it must be conducted with the aid of imperfect instruments. Particularly complex is the concept of the optimum resources allocation. It can be theoretically defined only in terms of an arrangement of assumptions specific to this question. Attempts to supplement them with other, vital elements are extremely complex and science has yet to solve the issues involved.

Thus we are faced with the question: *If the pattern of production and exchange do not match patterns that the law of value would form, does it impair the objective economic law and result in economic waste? Or is it justified by new regularities formed by new economic conditions?* In socialism this question assumes greater importance than in monopoly capitalism. A socialist planned economy enables conscious control of the distribution of economic resources in the public interest on a hitherto unknown scale. Such a great opportunity involves an equally high degree of responsibility for the negative effects of an incorrect allocation of means of production.

categories (proportions unconnected with the law of value) while others found in it a complete and unqualified subordination of the economy (including investments) to the law of value. In fact, as I am still trying to show, my views were not and are not so one-sided.

One form of an attempt to answer the requirements may be sought in a paper read by Edward Lipiński at the Second Economists' Congress.¹ There he opposed separating the law of value from the regulation of the structure of production. The law of value operates as a regulator and is the law of economic equilibrium; that is to say the law of proportional distribution of available labour resources. The difference in the operation of the law in capitalism and socialism does not touch the heart of the matter but merely the form in which it appears (especially the degree of planning). In a planned socialist economy it is much easier to adjust prices to values and to guarantee the proper distribution of available labour and the pattern of output. Lipiński identifies the operation of the law of value with what is called the law of proportionate development. He goes on to emphasize that in a centrally planned socialist economy the potential for planned development as a growth policy can reduce dislocation, waste and bottle-necks to a minimum and thereby can allow growth without crisis.

It follows from Lipiński that—abstracting from the particular social or political aims of economic policy—activity which contravenes the law of value makes an optimum distribution of labour impossible and hence is responsible for economic losses. However, it should be stressed that this view often lacks reasoning which is satisfactorily precise and properly developed. Moreover multiple interpretations are possible due to the fact that his paper is no more than an outline of the problem.

Strumilin's approach

Stanislav Strumilin constructs a similar argument in an article published early in 1957.² Although his main subject was the method of calculation of approximate values in socialism, he reflects his position on and the great importance of the law of value. A fuller development of those ideas appeared in his *Zakon stoimosti i planirovaniye* referred to above.³

For him the law of value has a broad meaning since it is the form assumed in a commodity economy by the general law of 'time

¹ E. Lipiński, 'O przedmiocie ekonomii i prawach ekonomicznych' ('On the subject matter of economics and economic laws'), *Ekonomista*, no. 5, 1956. See especially pp. 24-32.

² S. Strumilin, 'Zakon stoimosti i izmereniye obshchestvennykh izderzhok proizvodstva v sotsialisticheskoy khozyaystve', *Plannoye Khozyaystvo*, no. 2, 1957.

³ He also published a pamphlet with the same title which is an expanded version of the article. In 1961 it appeared in a book, *Problemy sotsializma i kommunizma v SSSR (Moscow)*.

saving' which regulates the division of labour. As already indicated, Strumilin considers the equivalence of commodity exchange (proportionality of price to values) a direct requirement of the law of value. Equivalence can be attained only when the structure of production—hence the distribution of available labour resources—corresponds to the structure of needs as expressed in effective demand given the income distribution. 'Only when all disproportions in production are eliminated will the proportionality of prices to values be reached with an absolute equilibrium of supply and demand.' Elsewhere he writes: 'The requirements of the law of value can be expressed in a condensed form by the words: away with disproportions in production. Long live equivalence in exchange.'²

Although Strumilin never used the expression 'the law of the proportionality of outlays of social labour', which was used in Soviet discussions of the 1920s, there is no doubt that he is close to some of the important economists of the period. For him the law of planned balanced growth is the socialist 'embodiment' of the law of value. The essentials of any qualification of the law are that in the new conditions society is conscious of its requirements and they are fulfilled not through compulsion but in a planned fashion of goodwill and therefore with better effects.³ Socialism's advantages over capitalism in operating with the law of value (for Strumilin these are among the most important elements in socialism's superiority) are outlined in seven carefully chosen points. He vigorously stresses the possibility of a degree of *ex ante* satisfaction of the law in socialism by taking account of foreseeable changes on the side of both output and consumption. Also basic to his analysis is the possibility (engendered by freely redistributable resources in conditions of social ownership) of shaping the structure of production in a planned way according to the law of value. Private capitalistic ownership may be a hindrance to the redistribution of means and especially in material form.

The following forms the grounds for Strumilin's forceful opposition to violations of equivalence.⁴

Strict observance of the law of value as well as the complete elimination of disproportions in output and exchange in a commodity guarantee the maximum exploitation of the existing productive forces while simultaneously maintaining a balanced satisfaction of all society's needs.

¹ S. Strumilin, 'Zakon stoimosti i planirovaniye', *Voprosy Ekonomiki*, no. 7, 1959, pp. 1-25.

² S. Strumilin, *Problems of Socialism and Communism*, p. 139.

³ *Ibid.*, pp. 135-9.

⁴ S. Strumilin, *The Law of Value and Planning*, p. 130.

Individual cases of deviations from the law can only take place when particular social preferences regarding the structure of consumption arise and especially when political considerations play a part.¹ These, however, are only exceptions to a rule which ought to be as closely adhered to as possible to avoid the risk of not attaining the economic optimum. He castigates those who advocate income redistribution through prices and rejects the justification of non-equivalence by the fact that the equality of the totals of prices and values is preserved. He realizes fully that the optimum allocation of labour resources cannot be achieved once and for all and that the proper proportions of today may be the disproportions of tomorrow. Furthermore he envisages the consequences of this fact—including the need for a more flexible price policy which would enable the price structure to keep pace with basic changes in economic conditions as a whole. This point deserves stressing since it provides a good illustration of the difference between Strumilin's ideas and those of economists who treat money-commodity categories as primarily a recording device. The latter type of price is more efficient the less the unit of calculation changes...

Strumilin's solution is decided and consistent; there can be no question of opposition between the law of value and the plan; the law of value must be the basis of planned social activity if society wants to manage its economy effectively.

But is it correct? Is the whole problem of resource allocation in a socialist economy solved by recognizing the regulating role of the law of value? Is every deviation from the law of value really a symptom of irrationality in economic management or, in other words—waste?

These problems to which we shall proceed are considered in the light of Strumilin's work; not because I wish to scrutinize his views in particular, but because his decisive position makes it easier to clear up the misunderstandings which have accumulated round the problem of the law of value and the model of the functioning of a socialist economy.

His reasoning embraces two areas of the problem—a broader and a narrower one.

a The narrower one deals with the law of value in socialism through reasoning identical to that of the first volume of *Capital*. This is

¹ Our plans at any given stage are determined, as we know, not only by the economic but also by the various political tasks of the moment. These tasks sometimes demand certain sacrifices from us at the cost of some secondary economic interests in order to achieve at a given moment more important political results. In such cases the law of value must obviously also be subordinated to the more general tasks of the plan' (*ibid.*, p. 128).

reasoning at a very high level of abstraction corresponding to the conditions of a simple commodity economy. Value—the basis on which the state of equilibrium rests—is determined exclusively by the socially indispensable outlays of living labour regardless of capital outlays (total fixed and turnover capital engaged in production). It follows from the argument that he always considers the average outlay within a whole branch of industry as the socially indispensable outlay. Thus in a socialist economy he ignores the possibility of applying elements similar to the Marxist concept of the value of agricultural products in Volume 3 of *Capital*—they allow for specific marginal magnitudes in certain circumstances.¹ And when he mentions the law of value in socialism and postulates patterns of output which guarantee the equivalence of exchange, he thinks of equivalence solely on the basis of values as defined in Volume 1 of *Capital*, rejecting all its modified forms.

b The problem also has its broader aspects. For even when we abstract from a definition of the basic magnitude from which we shall measure the deviations (defined according to Volume 1 of *Capital* or according to production price, to average branch outlays or to marginal outlays) the basic problem remains. In a socialist economy is there an objective necessity for distributing the labour available to society so that the price ratio of goods corresponds to the relations between some basic magnitude? It will be observed that, despite important differences, all formulae for constructing the basic magnitude, which are considered in Marxist literature, necessarily have one common feature: it is determined by the conditions of production. Perhaps the above formulation may be treated as the most general form assumed by the problem of the operation of the law of value in a socialist economy.

This is the general level at which I intend to conduct the analysis. I shall use the concepts 'law of value' and 'value' without delving into the problem of the actual form in which value appears in socialism and how it is quantitatively determined. I will merely assume that we are faced with a norm derived from the conditions of production.

Such a broad approach enables clarification of several matters of the first importance and in particular the question of the relation between resource allocation by means of the law of value and the problem of economic growth. Strumilin never explicitly stated that his argument was limited to discussing the pattern of labour resource allocation in only one given productive apparatus. On the contrary,

¹ See W. Brus, 'Uwagi o problemie rachunku marginalnego w gospodarce socjalistycznej' (Some remarks on the problem of marginal calculus in a socialist economy), *Ekonomista*, no. 3, 1958.

if the plan can guarantee balanced development only through satisfying the requirements of the law of value, such development cannot be imagined without including investment processes—and therefore without capital allocations, according to criteria provided by that law. Apart from political factors and particular social preferences of consumption patterns Strumilin excludes only one kind of decision from the operation of the law of value. That is the division of the national income into savings accumulation and consumption, i.e. the determination of the rate of growth. The specific passage from his pamphlet, *The Law of Value and Planning*, runs as follows:¹

We are faced with the completely justified question: does not the need to comply with the requirements of the law of value, referred to above, mean going too far in limiting and diminishing the importance of planning in the Soviet economy? In my opinion there is not such danger and can be no danger. Primarily, it must be recalled that in the USSR the areas within which planning operates and the dimensions of the tasks undertaken are incomparably greater and more varied than in the areas in which the law of value operates. Our plans determine not only the proportions of *output*—in complete agreement with the law of value—but also the basic patterns of *distribution*—which lie well beyond the sphere regulated by the law. (Examples are the ratio between consumption and saving ($v:m$) or between investment and defence expenditures.) Moreover, the division of national income into given proportions also fixes the main proportions of production between the basic types of capital goods and consumption goods. This holds even if we ignore the third area—‘means of destruction’—so important in the area of imperialistic wars.

(He goes on to discuss the political aims of the plan which we refer to above.)

Strumilin never mentions the distribution of investment expenditure.

¹ *Problems of Socialism and Communism*, p. 128, (italics in original). It is interesting that in the shorter version of the article ‘The law of value and planning’, the basic idea of this quotation is put rather differently. After noting that the plan covers a wider field of operation than the law of value we read: ‘our plans determine the proportions of production and such basic proportions of *distribution* as the relation between consumption and accumulation . . . etc.’ (p. 128). The difference is clear. From the first formulation it follows that the plan establishes only the ratio $v:m$ in accordance with the law and that the division between investment and defence expenditures ‘lies outside the sphere regulated by the law of value.’ However, here the impression is that the structure of outputs are also outside the sphere of the operation of the law of value.

ture between sectors that the plan establishes in accordance with the law of value and the ratio $v:m$ and the division into investment and defence expenditures lies outside the sphere regulated by the law of value. Here is undoubtedly a key point in the whole problem of the law’s operation especially from the standpoint of the model of the functioning of a socialist economy.

Before proceeding to the relationship between investment and the law of value we must consider its role in allocating social labour on the basis of the existing productive equipment. It will probably be fruitful to conduct the analysis in two stages beginning with the least complicated:

1. First we will relate the law of value to the structure of current product on assuming the productive capacity to be given and normally utilized.¹ Here let us consider the problem given the output of objects of labour (raw materials, semi-manufactures). In other words we assume that transformations are possible only within the structure of the final output of consumer goods. Then we shall also go on to consider briefly the relationship of the law to the structure of output of the objects of labour.

2. Secondly we shall relate the law of value to the structure of investment. This analysis will be conducted on the assumption that the state sector of production is the only existing one and that the economy is closed except for a few clearly marked instances. Other simplifications will, necessarily, also appear and some of them will be briefly discussed later.²

The operation of the law of value with the given productive apparatus

Beginning the first phase of our analysis, we assume that we are faced with a given structure of final production of consumer goods, as well as given socially necessary outlays for the production of each good (i.e. of a given value). The total value of supply equals the sum of effective demand; but a given structure of production and the assumption of a free choice of consumption goods on the market, making demand equal with supply for each good, requires a

¹ I do not understand this assumption as identical with the complete constancy of output of consumer goods since changes in the size of output may also take place as a result of changes in the ‘coefficient of efficiency’ (the use of equipment, the productivity of ‘living’ labour, the use of raw materials, etc.) and hence without new investment or changes in the sources of supply.

² One of these simplifications is the use of the term ‘the equivalence of price with value’ or ‘the deviation of price from value’ since strictly one should speak of the equivalence or non-equivalence of price ratios with value ratios (cf. p. 91).

deviation of the structure of prices from value. This deviation results in above-normal profitability for some goods and below-normal profitability or even loss for others.

The functioning of the law of value should find expression in a tendency for the structure of production to move in the direction of equalizing profitability. Assuming that shifting production will not run into any difficulties either from the angle of the structure of the fixed means of production, or from the angle of the structure of the working force and material supply, then equilibrium should come about through an increased share of those goods which at the initial point were the most profitable and a decreased share of goods bringing a low profit or a loss. The structure of production should change in such a way as to make possible equilibrium of supply with demand for every good, with the price structure corresponding to the structure of value. In this way profitability would be made equal with the maintenance of the total value of supply and the sum total of effective demand.¹

However, the question must be asked as to whether or not changes in the structure of production are in harmony with the interests of the society and the goals of the socialist economy. With the exception of the influence of various 'social preferences' the answer is a categorical 'Yes'. It is easy to prove, using the well-known 'indifference curves' (not necessarily in the form of a smooth even curve, but also in the form of broken convex curves), that when two

¹ Obviously, equilibrium conditions here are presented in a simplified way; for we have not taken account of the interdependence of the number of goods produced and the effects on cost of possible changes in the value of goods resulting from changes in the scale of output. As it is we assume unchanging value for each scale of output (or at least, for each level considered). Already such an assumption implies a certain shape of the cost curve: the constancy of total value with unquestionably inverse relation between the scale of output and the fixed cost per unit can only mean rising marginal costs. Hence it would ultimately be possible here to apply Lerner's formula of equilibrium at the point where marginal costs intersect with price. However, I do not wish to go into this type of problem especially in any attempt to pass to a somewhat lower level of abstraction. It would demand consideration of a number of variants for the cost curve, the nature of the flexibility of demand, and many other aspects of the theory of production which are not indispensable at this point in the analysis. I feel that the equilibrium conditions given above (prices corresponding to value, and the uniform profitability of different articles), may within the framework of the assumptions adopted, be considered as a simplified correspondent to the equalization of the rates of substitution.

Apart from this it must be noted that the example cited does not necessarily refer to any correction of a predetermined pattern of output (correction *ex post*). One might equally well assume that the original pattern of output is the first variant of the plan while the corrected structure constitutes a second variant. By this statement I mean to avoid any possible misunderstanding that the problem is treated exclusively on the assumption of market forms of economic relations.

structures of consumption are given, that structure which corresponds to equilibrium prices and unit outlays will require lower total outlays. Of course, if the broken line was an overall picture of equivalent structures of consumption the minimum sum total of outlays would be in all the possible points lying on the section of the curve with the same slope as the outlays line. In special cases when all the available structures of production of consumer goods would be placed on one straight segment with a slope equal to the line of outlays, solutions according to the criterion of the magnitude of the sum total of outlays would be equivalent.

Using the criteria formulated above, we can say that in the described situation, the law of value actually does work. There appears an objective necessity of arranging proportions of production and exchange in accordance with the principle of equivalence. The law of value does play here the role of the regulating force; it is the law of proportional distribution of a given amount of society's labour.

Does such a process of shaping the structure (proportions) of production by adapting them to the structure of demand constitute a recognition of the principles of 'consumer's sovereignty'? As usual, the answer largely depends on the way in which the latter is understood. If it is understood as the adaptation of the structure of output to the pattern of needs as manifested in effective demand *under given conditions, for a given distribution of the national income*, etc., then apart from particular social preferences, the answer would have to be in the affirmative. There is no reason why the principle of 'consumer's sovereignty' understood in this way should not be applied in complete accordance with socialist economic aims. What is more, it is precisely the socialist economy which theoretically creates the best circumstances for the adaptation of the structure of output to the pattern of the needs of the consumers. This is because it eliminates the existence of special interests deriving from private ownership which hampers the freedom of the processes of adaptation.¹

If, however, the principle of 'consumer's sovereignty' is raised to the rank of a basic premise for the rational management of an economy in general; if the consumer is turned into a kind of king whose every whim changes the pattern of output almost as efficiently as an officer's word changes the ranks of His Majesty's guard;

¹ Changes in the structure of production which are socially advantageous may be entirely at variance with the interests of the owner of a given enterprise or group of enterprises. Hence the monopolistic practices of preventing shifts in production by means of price policy and artificial interference with the structure of demand. A significant picture of this type of phenomenon is given by J. K. Galbraith in *The Affluent Society* (Boston, 1958).

then we have entered a fictional world which has no concern with economic reality. For, in the first place, equilibrium is established in conditions determined by production value being determined by the socially indispensable labour outlay per unit of output. Thus, in the last analysis, production determines the volume of demand for a given good with a given income distribution.

If, for example, the socially necessary outlay of labour for manufacturing a particular good changes for the better, it becomes less scarce and cheaper, which obviously affects demand and brings about various changes in the decisions of the 'sovereign'. In the second place, the structure of demand is obviously also determined by the distribution of incomes. In the third place, the tastes of consumers do not fall from the skies, but are the product of a whole complex of economic and sociological factors.

Thus the principle of 'consumer sovereignty' is not fit to be the cornerstone of economic theory. On the contrary, only by analysing the social laws of production and distribution, while taking into account several non-economic factors, can one explain the behaviour of the consumer, not individually, of course, but as a regular mass phenomenon.

As we have seen, the regulating role of the law of value means that the structure of consumer goods output is adjusted to the pattern of demand given the conditions of production and the distribution of income. However, there are situations when even such 'consumer sovereignty' may be at odds with public interest. Two types of cases exist in which conflicts arise between the structure of consumer demand, based on the principle of conformity and social preferences: 1. When production and exchange patterns (proportions) consistent with the law of value lead to an excessive consumption of products which are socially detrimental (because of their physical properties) and to an unnecessary limitation of the consumption of socially desirable products. We can include in this category the classical example of liquor versus books, although the problem is far more complex; 2. When it is deemed advisable to correct the social structure of the distribution of money income by means of the price system.

To what extent is it desirable or permissible to include this type of preference in determining the proportions of production and exchange? This question is difficult to answer from a general theoretical point of view, although many authors invoke here the authority of the basic economic law of socialism.

The first type of case has non-economic justification. All we can say about it is that to some extent any civilized society probably has a right to shape the structure of production for its population by

means of special—and not only educational—measures. It is because 'sovereignty' does not automatically guarantee rationality of behaviour (this applies not only to the consumer).

A socialist society can claim an even stronger right to influence its structure of consumption because in principle it should be free from the private property interest. In capitalism, behind an increase in the price of commodity *A* above its value and a decrease in price of commodity *B* below its value, there are the individual interests of particular *entrepreneurs* and especially those of monopolists or oligopolists. Such interest does not play any part in analogous decisions taken by economic authorities in a socialist state. This is particularly apparent when price ratios of particular goods or groups of goods produced in state enterprises are changed, but the sum of prices (the whole mass of commodities) remains constant. The general level of income of the state may be attained at higher prices of shoes and lower prices of textiles or vice versa. *From this point of view*, price ratios are a matter of indifference and they can be established on the basis of purely social preferences which would not be true in the case of private ownership of shoe and textile factories. Hence in a socialist economy the scope for active price policy, i.e. deviations of prices from values, is greater. When the production of different types of goods is concentrated in the hands of one owner—the State—reduced profits or losses at one point are compensated by correspondingly increased profit at another.

The second case is of a different nature. The subject of social preferences here is not the material structure of consumption but the distribution of income among different social groups or categories of the employed. The most important case—especially in the period of transition from capitalism to socialism—is that of employing prices to correct the distribution of income between the urban and the rural populations. It is from this angle that the problem of equivalence or non-equivalence was often discussed by Soviet economists in the 1920s. Strictly speaking, this particular problem should be eliminated by our assumption limiting us to an economy with only state-ownership. But even within this framework the question of the function of prices in correcting income distribution does not completely lose its relevance. Although a socialist state has at its disposal many direct methods of influencing the distribution of income—such as wage policy—there are circumstances in which the use of price may be necessary, or more advisable than the use of direct methods. This applies primarily to situations in which conflicts arise between needs and actual possibilities of differentiating incomes for purposes of creating incentive. It is often considered advisable to solve this conflict by admitting relatively wide differences between

money earnings; their impact is then reduced by setting above-value prices for products consumed by people in higher income brackets and below-value prices for those purchased by lower income groups.¹

Assuming in both cases that deviations of prices from value are not formal and hence that prices will balance demand and supply, active price policy leads to a division of labour different from that established by the law of value. In connection with what has been said above it must be clear, however, that satisfying social preferences by means of establishing the proportions deviating from the law of value results in a definite cost—in the form of surplus of total outlays above the minimum. Minimization of total outlays per given unit of final consumer output demands that conditions should be made precise—including or excluding autonomous social preferences. If these are included, the outlays minimization calculus is made only in the framework of alternatives satisfying the social preferences postulated. Beyond this optimizing procedure are, however, the appointment of aims and confrontation of gains and losses which result from accepting proportions different from those determined by the law of value. It is necessary to be aware of these consequences in decision-making. Therefore, the intended effects should be weighed against the adverse results of a decision conflicting with the law of value: deviations should take place only where justified by real needs, and then on a scale necessary to meet them. Gains and losses should be carefully weighed, particularly because a socialist state has wide possibilities of pursuing an active price policy. Owing to the existence of one common pool, the relative ease with which losses can be offset by surpluses may lead, and as experience indicates often does lead, to abuse of the redistributive function of price and to arbitrariness in economic policy. Attention should also be focused on methods of implementing a policy of setting prices at variance with values; methods should be used which result in the minimum side effects of the deviations.²

Even with all these reservations in mind there is no doubt that under certain conditions the exchange and output patterns which are optimal for public interest, are not identical with those corresponding

¹ In practice, an adverse situation may develop in which the differentiation of real incomes is greater than that of money incomes. In normal conditions, however, this is achieved not by price policy but by means of various kinds of free or subsidized benefits.

² It is worth noting that the deviations of prices from value in the final consumer product are of much less consequence than deviations in the prices of the means of production, because they have no effect on calculation in the following phases of manufacturing. It is true that they exercise some influence on the reproduction of the labour force, but this connection is certainly less direct, especially when deviations are not a rule.

to the law of value. Thus according to the criteria accepted above we can say, even at the first stage of the analysis, that the operation of the law of value in a socialist economy is subject to certain limitations as a result of special social preferences regarding the physical structure of consumption and the social structure of the distribution of income.

So far we have considered the problem of establishing production and exchange structures in the field of final consumer output. We have assumed that changes in production do not encounter difficulties either in the structure of productive capacity or in supplies of materials. This is obviously not a very realistic assumption. In fact the attainment of equilibrium at prices corresponding to value may not only be undesirable, but even impossible without appropriate adaptation in capacity or in the output of the objects of labour (raw materials etc.).¹

Let us now consider the role of the law of value in forming the output structure for objects of labour while continuing to assume a given productive apparatus.

It is important to note that the output structure for objects of labour is linked with the output of 1. consumer goods 2. investment goods (including increased stocks). If we assume that the division of the national income into an accumulation fund and a consumption fund is decided *ex ante*, we must necessarily divide the total output of the objects of labour into broad classes: the supply of materials for the production of consumer goods and the supply of materials for the production of investment goods. Technically, it is not always easy to make this division, especially as a considerable part of such materials may serve both ends. However, let us assume that such a division was made and that it was protected from any further interference. Then it would be necessary to make separate analyses for the objects of labour used in producing investment goods and for those used for consumer goods. Taking into account that the structure of investment goods is closely connected with the determination of the direction of investments, we cannot deal with them at this point. Instead we shall limit ourselves to a short analysis of the output pattern of the objects of labour in the framework of the share earmarked for consumer goods.

Both the size and pattern of demand for the objects of labour within this group are established by the needs of consumer goods output. Equilibrium in the production of objects of labour can be

¹ A separate problem which cannot be considered here, because of several non-economic aspects, are labour difficulties encountered in consequence of shifts in production—the problem of an appropriate structure of supply of skilled labour, and its mobility.

attained only in relation to effective demand for consumer goods regardless of whether a given pattern of output fulfils the demands of the law of value. Therefore, the deviation of the prices of consumer goods from values not only causes certain changes in the structure of consumer demand but also in the structure of the demand for means of production. Hence it also leads to a tendency to change the output pattern of the means of production.

In principle the output pattern of objects of labour ought to adapt itself to the demand pattern of final producers. The optimum distribution of society's labour resources is reached when demand for the objects of labour is satisfied at prices corresponding to values, i.e. without needing direct allocation. The output pattern for the objects of labour may also be affected by special social preferences particularly concerning the use of substitutes. Here again arise problems similar to those with which we have already dealt. The effects of the resulting deviations of prices from values (or of a system of direct rationing in physical terms) may depend on the actual circumstances involved. Either they are confined to the relationships between producers of the objects of labour and the producers of consumer goods or they affect the output structure and consumer demand as well.

The first case is found in its pure form when social preferences affect only the choice of methods of satisfying a given demand and where the degree of that satisfaction is neglected or at least where consumer demand is not affected (e.g. substitution of one kind of raw material for another without altering the use-value of the product or the capacity of the market). The second case is found when social preferences between methods do affect the use properties of the product (or even only the consumers' subjective assessment of them), altering the pattern of demand and hence also those of output and exchange proportions.

Finally we have the situation in which the pattern of output of the objects of labour is other than optimal because of capacity bottlenecks. If bottle-necks cannot be eliminated by foreign trade, the only possibility is new investment. Given a productive apparatus, and given potential alterations in the actual output pattern of objects of labour by means of foreign trade, we run up against disproportions which will obviously affect the structure of output of consumer goods and the structure of demand.

Thus, it would seem, the operation of the law of value in the production of the objects of labour does not raise any new theoretical points apart from obvious complications to the process of adaptation caused by the mutual interaction of the spheres of consumer goods and the objects of labour. Of much greater importance is the problem

of time-lags in adapting the pattern of supply to a pattern of demand. These may result from the inflexibility of supply of many raw materials (especially agricultural and mineral ones). At the same time, however, the demand for the objects of labour is much more stable than the demand for final consumer goods, particularly with respect to manufactured goods.

The law of value and the choice of investment pattern

So far our argument seems to confirm the earlier discussion of Strumilin's approach to choosing the investment pattern as a basis for examining the operation of the law of value in a socialist economy. From our discussions it follows that the structure of capacity enables us to determine the structure of output in a way that bases exchange on the principle of equivalence. (Naturally, this assertion abstracts from certain social preferences in consumption and from correction by foreign trade.) When capacity utilization is very high, the question of overcoming disproportions between the structure of needs and that of production is pre-eminently connected with investments. As I have pointed out, Strumilin does not carry his argument to this conclusion, but it is quite clear that the possibilities of making shifts within the output of a given productive apparatus play a limited though important role. If the regulating role of the law of value was not extended to cover the structure of the allocation of investments, sooner or later the tendency to achieve equilibrium with prices corresponding to values would meet insuperable obstacles.

What is implied for investment choices by the regulating influence of the law of value? What criteria stem from the operation of the law in allocating investment resources among various competing ends? Let us try to answer these questions assuming that the rate of investment is determined autonomously by the central planning authority, which also determines the size of investment for social purposes, defence etc. Thus, the problem concerns allocating investment expenditures for strictly economic purposes for spheres in which no special extra-economic preferences are at play. How far such a distinction is possible will be discussed presently.

In our answer we shall deal mainly with the question of choosing the directions of investment, i.e. the fields in which capacity is to be increased and also the rate of any increase. We shall enter neither into the problem of choosing the methods of production nor into that of the methods of implementing investment projects.

Let us return to our starting point. There exists a disproportion between the structure of supply and the structure of demand for consumer goods, and all possibilities of eliminating it by shifts

within the existing apparatus have been exhausted. This disproportion manifests itself in that the margin of profit on a certain group of commodities is above normal, and for another group, below normal (possibly even involving a loss).¹

According to the law of value, investment should be allotted so as to promote equalization of profit rates: to invest, first of all, in those sectors in which profitability is higher than normal while investing less, or not at all, or even allowing disinvestment in sectors where profits are lower or non-existent.

If this simple rule could be considered as exhausting the whole matter, those who regard market criteria as sufficient for the choice of the directions of investment would be right.² However, the whole problem is not so simple. Investments make a system dynamic; they change the data and alter equilibrium conditions. Hence, actual relationships among quantities do not provide sufficient indication for choosing the directions of investment in a socialist economy. Let us deal with this problem in greater detail.

We have to start with the problem of the marginal capital output ratio. It is not enough to say that the margin of profit on commodity *A* is higher than on commodity *B*, and to decide on this basis to increase the productive capacity of commodity *A*. The size of investment expenditures necessary for increasing production has to be taken into account. This marginal capital output ratio is not reflected in profit differentials calculated on the basis of value in its strict sense.

Strumlin, among others, makes this postulation without considering the amount of fixed and working capital used in production. On the other hand, it is manifested only by differences in profitability calculated on the basis of the 'prices of production' in the sense this term was given by Marx in vol. 3 of *Capital*. As a result the latter

¹ The cause of such deviations may be bottle-necks both in capacity for producing consumer goods directly and also in capacity for producing those objects of labour needed to produce consumer goods. The manner by which these proportions are reflected through differences in profitability depends upon the principle adopted for determining prices of the objects of labour. When equilibrium prices are employed in the turnover of the objects of labour, disproportions in output are reflected in differences in profitability correspondingly placed at each level; otherwise the effects of disproportion at all levels will be concentrated in the differences of profitability of consumer goods.

² It is only from the market that enterprises and economic managements at all levels can receive indications on the actual state of social needs and the degree to which they are satisfied as well as on the correct and economically most effective area, character, structure, rate and location of production and productive investments'. J. Popkiewicz, 'Prawdziwa rentowność' ('True rentability') in the collection *Dyskusji o prawie wartości ciąg dalszy* (Discussions about the Law of Value, continued), Warsaw, 1957, pp. 35-6 (my italics—W.B.)

can better express long-term alternatives of choice. But even the production prices cannot be taken literally, because they reflect the capital coefficients of a previous period. Theoretically the production prices could be corrected by what might be termed a 'capital coefficient of reproduction', but in practice it is not realistic. It follows that, with any formulations of the basic magnitude, more differences in profitability cannot be regarded as an automatic indication for investment priorities. To say this is no more than stating a truism, and it would not be worth mentioning were it not that difficulties involved in rigid implementation of the principle of equivalence are clearly illuminated. But this is not the most important thing.

The second problem is the influence of investment on conditions of production and thus on ratios between values. For example, the price of product *A* deviates from the value upwards (value 5, price 8) and that of product *B* deviates downwards (value 10, price 7). Assuming capital coefficients equal, the priority of investment in the production of *A* is clear against the background of the given value and price relations. Let us imagine, however, that no special progress took place in the technology of producing *A*, and therefore, that new equipment does not significantly change the amount of the socially necessary labour outlay per unit of the commodity. Furthermore, new investment in the production of *B* allows a reduction in outlay per unit from 10 to 4. With this new ratio of values the price ratio *A*:*B* = 8 : 7 turns out to be closer to equilibrium conditions than the previously postulated one of 5 : 10. From an economic point of view, investing in production of *B* and achieving an equilibrium based on the relation *A* : *B* = 5 : 4 becomes a more justified solution than investing in *A*, and reducing capacity for producing *B*, as old equipment wears out and attaining equilibrium on the basis of value relation *A* : *B* = 5 : 10. Although this is an extremely simplified example, it illustrates the genuine potential for deep-seated change in per-unit labour input. Such relative changes for indifferent products can lead to profitability differentials, as a result of using new productive equipment.

Thus, we already have two factors which impose fundamental modifications on the choice of investment pattern which might be made on the basis of existing output and exchange patterns. We are not concerned here with the institutional aspect, i.e. whether investments are made by autonomous enterprises, or by the central authority which is guided by market signals. And yet, the above-mentioned factors will suffice only when each investment decision is considered separately, as if in isolation from others. If, however, an investment project for a particular sector is considered as a component part of the total set of planned investment decisions,

then the scope of alterations involved in patterning investment is considerably extended. We can say that it acquires a new quality. Now we are not only concerned with the degree of capital intensity and how it affects the conditions of production in a given branch, but with more or less radical transformations in the general level of technique, in the magnitude and structure of the productive capacity of the country in the level and structure of income, of costs etc. If general investment decisions are made in a long-term plan, i.e. on the basis of what is called a broad time horizon, then clearly problems of equilibrium should be considered for a completely new set of conditions. Moreover, not only purely economic conditions must be considered, but also all those sociocultural conditions which affect the structure of demand.

Joan Robinson writes in one of her papers that 'profits obtainable from any particular commodity may serve as a useful guide to the planners in deciding priorities of expansion, and in so far as they follow this guidance they are acting upon the principle of the competitive model and tending to bring about an equalization of the expected rate of profit on investment in all lines of production of saleable commodities'.¹

Generally speaking one can hardly deny the logical correctness of this statement, as indeed of any statement in which the principle of the equalization of marginal revenues is taken as the criterion for rational allocation of resources. As long as the next input to some branch of production brings greater returns than in other branches, it should be given priority. Neither does the concept of profit used by the author call for reservations; by profit she understands the whole surplus over cost included in price. Indeed, this is one of the indispensable yardsticks for measuring the effects of economic activities both under socialism, and in long-term choices. The effects cannot be measured without considering the intensity of the need satisfied by a given commodity—that is without evaluating the price that the buyer is prepared to pay. If with the same amount of means we can produce two kinds of goods, one of which can be sold at a higher price, then by producing it we achieve better results from a general economic point of view as well as from the point of view of the enterprise. If we disregard very subtle differences, the requirement that expected rates of profit should be equalized can, in fact, be considered identical to the requirement that price ratios should be equalized with the ratios of values. And this is the tendency to shape the structure of production and exchange in accordance with the law of value.

¹ J. Robinson, 'Some Reflections on the Philosophy of Prices', *Manchester School of Economic and Social Studies*, no. 2, 1958, p. 134.

However, one reservation of great consequence should be raised here: the requirement that equalization of profit rates should not be applied to the *initial structure*, but to the projected structure. In calculating 'expected profits' in a socialist economy, we must take into account all the new conditions which will be different in the final situation from their original state because of the fruition of a set of investment decisions. *The law of value acquires here a new specific sense, far different from its usual interpretation; it works in the perspective aspect* (a very important, though often forgotten aspect). From the point of view of optimal resource use, we must bear in mind that the structure of productive capacity should ultimately create the future conditions for adjusting the output structure to the then prevailing demand and structure and in this sense the future production and exchange proportions should be based, as far as possible, on the principle of equivalence, consistent with the law of value. It is not, by any means, easy to meet this requirement for long-term planning since many component parts of the whole picture are very difficult to predict, especially in quantitative form. Nevertheless, it cannot be ignored that as the technique of planning improves, it should play an increasingly important role.

That this aspect of the law of value has been admitted, does not mean that the principle of the equalization of the rates of profit becomes a sufficient 'guide for planning authorities to determine development priorities', or that these authorities 'act according to the principles of a competitive model'.

In the first place, the equalization of profit rates cannot be treated as the guide for development, but rather as a supplementary, though very important, factor. It operates within the framework of a chosen pattern of development rather than in choosing that pattern. Equilibrium based on value is unequivocally determined only for a given productive apparatus and not at the moment when basic decisions concerning the future productive apparatus are to be made. The equalization of profit rates implying that the proportions of production and exchange correspond to the law of value can be achieved at different levels and for different levels and for different structures of capacity. Whether the principle of equivalence is satisfied with cheaper chemical and more expensive electrical goods or vice versa, cannot be deduced from the rule itself, regardless of the choice of general lines of development. If a relatively greater amount of resources is employed in the chemical industry, it is to be expected that chemical prices corresponding to values will drop in relation to those of electrical goods. This, of course, will have a bearing on demand. Equilibrium based on value, the equalization of the rates of profit etc., will be attained with different proportions than cases

in which investment decisions would relatively accelerate the development of the electrical equipment industry. Although choosing the direction of development is not an act of an arbitrary nature, the criteria for this choice cannot be reduced to the law of value even for a distant time horizon. Only within the broad framework of the target system, desired equally for the level and structural composition of its capacity, can and should we introduce criteria based on the law of value. Then, we can strive for a mutual adjustment of patterns of supply and demand, prices and incomes, etc. in which conditions of equivalence can be satisfied. (This assumes that they are not at odds with socially preferred patterns of consumption and income distribution or at odds with the requirements of further growth.) The scrutiny of these criteria will not be without influence on the original structure; sometimes certain corrections will probably be necessary because of a mutuality of dependence. However, this mutuality does not mean that the basic and dominating direction of influence cannot be detected. But what is dominant here is the dependent nature of equilibrium determined by the autonomous prospective system of general conditions.

Secondly, planning authorities cannot act according to the principles of a competitive model for investment projects which fix the general lines of an economy's development. This would mean not subordinating the direction of investment to the prospective situation, but primarily to signs and incentives coming from the market. Therefore, out of a given set of production and exchange proportions, arises a given system of prices and costs, a given structure of supply and demand etc. To act according to the rules of a competitive model is to act under the influence of the law of value for today, and perhaps for the relatively near future. Achieving the main directions of investment by means of these rules would shape the process of growth in the characteristic manner of a capitalist economy.

Two causes lead to the connection between the investment decisions made by private enterprises and the market. First, a given set of costs and prices largely determines investment possibilities, and they in turn always depend to some extent on the size of profits. Secondly, the existing set of market magnitudes is the most measurable element in the choice of investment. Capitalist enterprises include, of course, in their calculations such elements as the marginal capital coefficients, or of rationalization in methods of production; the effect of investment on technical coefficients and on the structure of supply and market capacity; and certain forecasts of general trends in economic activity.

However, general forecasts are not very reliable so that it is

difficult to stray far from the point of departure. Since there is nothing that one could describe as a specifically intended end result, and since any resulting situation is the accidental product of spontaneous, unco-ordinated, often contradictory individual decisions, there is no other choice but to found decisions on the existing economic situation in order to enable measurable profitability calculation. Leaving aside social-service investment which cannot be translated into the language of direct profitability, one can say that in capitalism the time horizon and the scale of related investment are limited not only by the supplies of capital available to individual enterprises, but generally also by the relations of production which exclude co-ordinated conscious activity aimed at the creation of a harmonious target situation. These factors make it impossible to get beyond current market conditions.

The degree to which the time horizon and scale of investment is limited may differ depending on a number of factors, above all, the degree of capital concentration. Where capital is divided among a great number of separate bodies, the time horizon and scale of investment are particularly limited, and investment decisions are taken under an immense pressure of existing conditions. The fiction of perfect competition is relatively close to reality. It assumes that the influence of individual decisions is infinitely small and hence that after any one of these decisions the existing situation stays constant. With the increasing concentration of capital, the problem of adjusting to given market conditions gives way to estimation of the possibilities of influencing the market in order to promote one's own economic interests. But even monopolies, or oligopolies, only push back the limitations, they cannot eliminate them. The motives governing private actions prevent utilization of the objective possibilities of progress, do not allow use of a wider time horizon, and constrain the scale of investment to that which merely permits calculation in terms of directly measurable profits. An attempt to escape these limitations is found in the increased public investment activity of modern capitalism. This is not the place for an appreciation of the effectiveness of this type of increased state intervention. But one thing is certain—in spite of the increasing part played by public investment, the development curve of contemporary capitalism is still, in the main, determined by private decisions.

Capitalistic production relations thus maintain that the transition from one set of proportions to another occurs through successive fractional changes, and that their direction is largely determined by the current set of actual market conditions. The difference between the curve (or rather the broken line) of capitalist development and the straight line of transition from the original position to the one

aimed at is well illustrated by the so called 'pursuit curve'.¹ True, the situation shown by means of the pursuit curve does not fully reflect the merits of planned development but from our point of view it is worth mentioning.

In the 1920s, among many interesting scientific discussions in the Soviet Union, there was controversy between the supporters of two different conceptions of the plan: the so-called genetic approach, and the teleological approach. Those in favour of the genetic approach stressed the importance of the original economic structure (proportions) from which the directions of further development were to follow. Those in favour of the teleological approach contended that planning should, first, concentrate on the target economic structure and only then on the paths of transition from the original to the future structure. Although it is difficult to review the entire dispute, which was affected by historical circumstances, it appears that the teleological approach has much in its favour because it emphasizes the active, transforming nature of the plan.

However, special care is needed to avoid the dangers of arbitrariness and of disregarding feasibility, especially in determining the magnitude of possible changes and their pace. To refuse to submit meekly to the conditions of today should not mean to ignore them. Thus, there is also some truth in the genetic approach. Although planned investment decisions cannot be subordinated primarily to adjusting the original economic structure toward an equilibrium based on the law of value, at the same time, this adjustment should not be disregarded. The need to eliminate disproportions existing in the original setting does not form sufficient criteria for choosing the directions of investment, but it is undoubtedly one of such criteria. *Ceteris paribus*, that solution will be closer to the optimum which, without harming the economy in the long-term, helps to eliminate current structural disproportions—the cause of non-equivalence. Moreover, one must remember that transition has an easier passage the closer it is to balanced growth (i.e. it is easier the more effectively structural disproportions, appearing at particular stages, are mitigated without simultaneously disturbing the main trend of development). Investment efforts in a socialist society cannot be one-sided and concentrated only on attaining the prescribed future regardless of what happens along the way. This kind of one-sidedness endangers both immediate and long-term objectives, and explains the importance of complementary investment projects designed to directly eliminate capacity bottle-necks. The allocation of resources for this kind of investment is subject to rules similar to those which

¹ See M. Dobb, *On Economic Theory and Socialism*, p. 40.

determine the output pattern in a given capacity structure. Apart from specific social preferences as to the structure of consumption, such allocation should be based on the law of value in its 'current' aspect, due to consideration given to the capital coefficients and their impact on the ratios of values.

Then the relationship between the role of the initial and of the target economic structure in determining investment allocation is one of hierarchy rather than of two exclusive alternatives. The decisive role belongs to the optimal target structure. Therefore, the role of the initial structure depends upon the degree of difference between target proportions and initial ones. Investment decisions based on the law of value are correct in a planned economy when the economically justified proportions of the target structure largely coincide with those of the initial one. When, however, the target structure differs radically from the initial one, the task of investment planning, far from attaining equivalence with the given ratios of value, may entail the opposite. It may mean shattering the existing structure and violating the conditions of equivalence if such occur. This is particularly true in periods of rapid industrialization with a profound transformation of social relations. I cannot agree with the view¹ that autonomous determination of the directions of investment is necessarily limited to this kind of special case of a more or less exceptional and shortlasting nature while in normal cases the general market indicator would be sufficient. Special conditions undoubtedly affect the sharpness of the 'bend', but they are not adequate to explain why the choice of the main directions of investment are so relatively independent of the requirements of the law of value. An explanation can only be found among the general properties of a planned, socialist economy for which macro-economic, long-term and dynamic points of view are supreme. True, previously undeveloped socialist countries will attain a mature economic structure, the necessity of moving in leaps will gradually wane, and in planning target positions more attention will be given to ensuring current equilibrium. On the other hand, this does not mean that such economies will become less dynamic, less capable of rapid economic growth. With a growing rate of technical progress, any period of several years will induce essential changes in overall economic structures. If we grant a growth in the importance of long-term plans clearly the *ex ante* formation of target structures which differ substantially from initial ones are not exceptional and pertinent only

¹ A view of this kind is put forward by Ch. Bettelheim in *Les Problèmes théoriques et pratiques de la planification*. Similarly some Yugoslavian writers strongly emphasize this point (see for example Borivoje Jelić, 'Neki aspekti dejstva plana i tržišta u nasoj privredi', *Ekonomist*, no. 1-2, 1958, Belgrade).

to the initial growth stages of underdeveloped socialist countries. Rather they are normal features of a planned socialist economy. Thus it is not only during rapid industrialization in general that the guidelines of the law of value are insufficient to fix the main directions of investment under socialism. At best, relying solely on the law of value would set the growth process on a slow and vastly circuitous route.

I think our discussions confirm the thesis, that the question of a rational choice of the directions of investment cannot be solved by accepting the simple formula which recommends expanding the capacity of goods whose market price is higher than value, in order to align price and value ratios.

Although the relative deviation of current price ratios from the ratios of socially necessary outlays should play some role in making decisions as to the structure of investment, it is nevertheless difficult to assume that this deviation might become the primary indication for allocating investment outlays based on the deviation of prices from costs in a given moment. As a criterion for decisions dealing with the basic investment decisions (which in turn determine the direction of economic development and the final structure of consumption) the deviation of prices from costs at a given moment is definitely inadequate. Dependence on this deviation as a criterion with the optimum choice of future consumption might lead to completely mistaken conclusions.

Planning investment does not reject criteria stemming from the law of value, but (to paraphrase Marx in *The Introduction to the Critique of Political Economy*) it absorbs them as elements subordinated to a more developed proposition. The result is a wider range of criteria peculiar to an economy in which conscious macro-decisions determine the distances and movements of all components of the economic process, at least in general.

The plan defines, to some extent autonomously—i.e. not on the basis of current market indications, a general set of proportions. But now in this framework, if in the final analysis different structures of final consumer output fulfilling appointed aims are possible, the rule of harmony between equilibrium price ratios and outlay ratios (in condition of target situation—the law of value in perspective aspect) comes to the fore again. And only the appearance of social preferences in the target situation will give a basis for the deviations of equilibrium price ratios from value ratios.

Socialist planning achieves socio-economic rationality of the production and distribution processes. As such it demands subordinating some objectives for individual sectors to the objectives of society's entire productive and distributive endeavour, it demands

the integration of sectoral objectives towards the common goal by which society is guided in its economic activities.¹

This common end is not, of course, the sum of autonomous ends. The need for the integration of individual aims into common social goals arises because the latter is not a simple collection of the objectives attained by separate economic units. This is evidenced through the process of choosing the direction of investment flows and thus determining the general trends of development. When Marxist economists stress centralization of basic investment decisions, the cause is not merely a desire to have the central authority behave (though in a different form) in the image of the market. In actual fact, it might realize a market structure of the economy better than the market itself, since frictions are avoided. If only because of the broad social interest, the central authority wants to ensure economic patterns different from even those in the most perfect markets.

Can socio-economic criteria of rationality be expressed in a quantitative way similar to those of private economic rationality, which is based on relating money outlays to profits? Some authors think so. One of them is Oskar Lange who believes that rational economic activity is possible only when the ends and means are expressed in a quantitative way in uniform units of measurement.² I entertain some doubts about the accuracy of his view. It seems that to express the purposes of socialist economic activity in a uniform quantitative index (e.g. the size of national income) can only serve as a general guide. In my opinion, this holds because the line of distinction between economic and non-economic factors cannot be clearly distinguished if viewed from a sufficient distance. After all, the whole of economic activity under socialism serves to achieve definite social ends, and it is difficult to distinguish strictly economic elements from those of a broadly social nature. I am disregarding the steady increase in the long-term economic importance attached to factors traditionally treated as non-economic (the whole problem of investing in man).

Differences of opinion on this subject are of rather secondary importance. In particular on the choice of the major trend of investment, they appear to be conducted on the common basis of accepting the superiority of social objectives. Viewing criteria based on the law of value as insufficient is not tantamount to abnegating quantitative calculation. It does, however, imply that the latter are to be constantly weighed against criteria of a rather qualitative nature (those which concern broad social benefits).

At this point I want to refer briefly to criticism of the centralized

¹ See O. Lange, *Political Economy*, p. 179.

² *Ibid.*, p. 181.

model found at the end of the previous chapter. It was asserted that if the law of value was disturbed in this model and the resulting price structure was faulty, the choice of the main flow of investment was necessarily irrational.¹ It is difficult to agree with this, though, of course, it does not exclude the existence of other causes of error. The central authority in a planned economy is in a contrary situation to that occupied by individual capitalist enterprises for which all the elements of the economic situation are given from without. Prices (including the price of capital) constitute the tangible indicators whilst concealing the economic perspectives. For a central planning body, particularly on a long-term basis, many of these elements should be treated as variables dependent on decisions dictated by broad global criteria. The central body, unlike an individual enterprise, can adjust prices for its own purposes on the basis of its knowledge of the economy's general prospect for expansion. The choice of long-term investment trends by the central authority are not restricted to the range of assumptions which must satisfy an entrepreneur. That is not to say that the central authority is different to a proper price structure in making investment decisions. But where long-term decisions are involved, the role of prices is much greater in selecting methods for executing planned investment projects, than in determining the aims themselves. This is understandable since the choice of means affects chiefly the existing supply of labour, whose cost should correspond to the prevailing economic conditions. Finally, the price system is basic to freeing the central authority from the responsibility for every investment decision. It is a condition of decentralizing a portion of investment decisions that there exists a correct price system since it is an indispensable form of reflecting alternatives of choice. When the price system is incorrect, even small decisions must be taken centrally; this certainly would not favour rational choice.²

Conclusions

The most general conclusion to be drawn from this chapter is probably that Strumilin's view of the law of value (with its useful elements) does not fully allow for the tremendous complexity of the problem. Whether the law, strictly interpreted as equivalence of exchange, operates under socialism unfortunately defies a simple

¹ See p. 88 above.

² See the very interesting statement of L. Kantorovich in the discussion in the Economic Institute of the Academy of Sciences of the USSR (*Soviet Papers on the Law of Value* no. 1, pp. 289-95).

answer. Though the reader might prefer it, in my opinion the answer is not clear-cut.

Operation of the law of value cannot be separated from attempts to control the output structure so that supply and demand balance at price ratios which correspond to value ratios. To attain this type of equilibrium requires that the regulating rôle of the law of value be consistently observed in the realm of investment decisions. We know, however, that subordination of main investment flows to the law cannot be accepted as an objective necessity. The chief investment decisions made by central authorities should be autonomous. This does not imply that by definition the choice of solutions must differ from any that would follow from the law of value. It is essential to examine economic results on the direction of development, on the target structure of capacity, and as the transition from the initial to the target position, which would follow from applying the law. The autonomous character of investment decisions means that central authorities need not be constrained to maintain any structure which uses the law of value as a prime criterion of rationality. For in line with the basic objective regularities of a socialist economy, the above decisions may also go in other directions, without causing losses and with results closer to the social optimum.

The law of value, then, is not an absolute, general regulator of output and exchange proportions. It retains this rôle only within limits determined by autonomous decisions at the level of the central authority and primarily by decisions on investments and on certain current preferences. Within these bounds, the allocation of the available labour resources is the more rational, the better the proportions of production and exchange conform to conditions of equivalence. Consequently, using our concepts strictly, we must say that the law of value operates under socialism within certain limits. Thus defined, it would be erroneous to treat the law's rôle as being of little significance merely because of its largely static nature. The dynamic aspect hardly eliminates problems of resource allocation under given conditions. They are included as subordinate, but significant, elements.

Does the law of value, as defined here, pre-determine to any extent the structure of the mechanism of functioning of a socialist economy? Certainly not directly and not in the traditional sense which identifies the area of operation of the law of value with that of using the money-commodity forms. Our analysis of the factors regulating the socialist division of labour leads rather to revelation of specific conditions which ought to be fulfilled by an efficient economic mechanism. This mechanism ought to make it possible to transcend the law of value while simultaneously enabling us to conform with the law's

requirements in all situations where the law of value retains its quality as a regulating factor of the division of labour in a socialist society.

These are the criteria which should be applied when evaluating the assumptions of models of the functioning of a socialist economy.

5

A model of a planned economy with a built-in market mechanism (‘a decentralized model’)

Thus far we have rigorously confined ourselves to a generalized analysis of the working of the law of value. We wanted to study the relationship that exists between the optimal proportions of the division of society's labour resources under socialism and the proportions of that division determined by the law of value. This was exclusively an analysis of what could be called the essence of the allocation problem in a socialist economy, completely excluding the actual form of the allocation. In particular, our discussion did not include the role of money-commodity forms of resources allocation and their relation to the law of value. Only one general thesis has been formulated in this respect: the existence of money-commodity categories itself does not necessarily mean that the law is in operation. In this chapter we shall elaborate this thesis and draw various conclusions relevant to the theory of models of the functioning of a socialist economy.

Definition of the market mechanism

Money-commodity categories, or value categories, such as commodity, money, price, trade, credit etc. in a socialist economy may have different meanings and in varying degrees may be connected with the problem of resource allocation. For instance under ‘war communism’ price as a money-commodity category was used to express the aggregate output of individual establishments and of the whole state economy. Yet in the government sector the form of purchase and sale did not appear at all, and goods produced were transferred from producer to consumer by means of direct, non-monetary distribution. Price in this case fulfilled the function of a conventional, accounting magnitude used primarily for recording and statistical purposes. Similar in character are the so-called constant prices long used as basic units for measuring the degree of plan fulfilment in enterprises or industries. In principle a purely recording role can also be played by any other price system (including current price) provided it is not related to any acts of purchase and sale or to the flow of money from the recipient to the