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ON THE THEORY OF NON-CAPITALIST ECONOMIC SYSTEMS

Alexander V. Chayanov

In modern theory of the national economy, it has become customary to think about *all* economic phenomena exclusively in terms of a capitalist economy. All the principles of our theory—rent, capital, price, and other categories—have been formed in the framework of an economy based on wage labor and seeking to maximize profits (i.e., the maximum amount of the part of gross income remaining after deducting material costs of production and wages). All other (noncapitalist) types of economic life are regarded as insignificant or dying out; they are, at any rate, considered to have no influence on the basic issues of the modern economy and, therefore, are of no theoretical interest.

We shall have to accept this last thesis in regard to the indisputable dominance of finance and trading capital in world commerce and the unquestioned part it plays in the present organization of the world economy. But we must by no means extend its application to all phenomena in our economic life. We shall be unable to carry on in economic thought with merely capitalist categories, because a very wide area of economic life (that is, the largest part of the agrarian production sphere) is based, not on a capitalist form, but on the completely different form of a nonwage family economic unit.1 Such a unit has very special motives for economic activity and also a very specific conception of profitability. We know that most peasant farms in Russia, China, India, and most non-European and even many European states are unacquainted with the categories of wage labor and wages. Even superficial theoretical analysis of their economic structures shows that their specific economic phenomena do not always fit into the framework of classical economics and the modern theory of the national economy derived from it. We must go beyond this conceptual framework of the national economy if we are to conduct a theoretical analysis of our economic *past.*

The late systems of serfdom in Russia and slavery in America raise the question whether the concepts of contemporary economic thought (capital, interest, economic rent, wages) are applicable. Wages, as an economic category in the modern meaning of the word, is obviously absent in the systems mentioned above; and, together with this category, the customary theoretical content of other categories of our national economic systems drops out, because rent and interest as theoretical constructs are indissolubly connected with the category of wages. On the other hand, we acquire from such observation a new category, completely unknown to modern theory, *the price of slaves.*

We are in an even more difficult position regarding the economic systems of primitive peoples. In these systems, a basic category like the market price (fundamental to our theoretical thought) often does not exist. In this, the economic structure of the Roman Colonate, as well as that of the natural economy of primitive people, lies completely outside the framework of present economic theory. Even with regard to the Middle Ages, we would have difficulty in analyzing price formation with our existing equipment. How, for example, does one price the products that the feudal lord exacts as payment in kind and exports for sale to faraway markets?

The German historical school undoubtedly has the extremely great merit of having written about the economic past (especially the Germano-Roman and the ancient world) and of having disclosed their detailed morphology; but even the most thorough and exact description as such is unable to provide a theory of the economic facts described. Economics, however, urgently needs a theoretical analysis of our economic past; for each of the economic types we have already partly depicted, an economic system should be constructed corresponding to its peculiar features. It occurs to me that research in this direction, even if it may appear to be an amateurish collecting of antiques, could achieve much. Merely as economic paleontology it would not only further comparative analysis of existing economic formations, but would also be of great use for the purely practical aims of economic policy. For not only the family labor economic unit type (which we shall define in more detail later) but also other older types still exist in great numbers to the present day in non-European countries. Theoretical analysis with categories really adequate to their characteristics would contribute more to colonial policy than, for example, forcing the economy of Zambeziland into the Procrustean bed of the modern Manchester School's economic categories.

We regret that neither Aristotle nor other ancient writers have left us an economic *theory,* as we would understand the word today, of the economic reality surrounding them. The Fathers of the Church, as contemporaries of the feudal regime, often touched on economic problems in their treatises; but, as we know, they devoted all their attention to the ethical side of economic life. Russian economic literature at the turn of the seventeenth and eighteenth centuries, as represented by Sylvester, Pososhkov, and Volynskii, dealt mainly with private economic affairs or with problems of state administration. Neither the slave economy in the United States nor the economy of the serf period in Russia has left us a complete economic theory corresponding to their special structures. As we have little knowledge of the Japanese and Chinese literature, we cannot judge the state of their theoretical attempts to explain past forms of economic life. Since past epochs have failed of their own to evolve any theories about former economic systems, we are compelled to try to construct them in retrospect.

We know that the key to understanding economic life in capitalist society is the following formula for calculating economic profitability: an enterprise is considered profitable if its gross income, *GI,* after the deduction of the circulating capital advanced (i.e., of the annual material expenditure, *ME,* and of the wage costs, *WC),* makes a sum, *S,* which is as large or larger than the whole of the (constant and circulating) capital, C, of the enterprise at interest calculated according to the rate prevailing in that country at that time *(a).*

$$GI - (ME + WC) \gtreqless C \cdot \frac{a}{100}$$

All calculations of theoretical economics start with this formula, explicitly or tacitly. The elements of this formula—the exchange value (market price) of gross income and of material expenditure, the wages, and the interest on capital—in this case are not any accidental private economy magnitudes but basic phenomena of a social and economic order. The content and task of the theory of the national economy is the scientific explanation of these basic phenomena.

The economic theory of modern capitalist society is a complicated system of economic categories inseparably connected with one another—price, capital, wages, interest, rent, which determine one another and are functionally interdependent. If one brick drops out of this system, the whole building collapses. In the absence of any one of these economic categories, all the others lose their specific character and conceptual content, and cannot even be defined quantitatively.

Thus, for example, one cannot apply, in their usual meanings, any one of the economic categories mentioned above to an economic structure that lacks the price category (an entire system of units on a natural economy basis and serving exclusively to meet the needs of the laboring families or collectives). In a natural economy, human economic activity is dominated by the requirement of satisfying the needs of each single production unit, which is, at the same time, a consumer unit. Therefore, budgeting here is to a high degree qualitative: for each family need, there has to be provided in each economic unit the qualitatively corresponding product *in natura*.

Quantity here can be calculated (measured) only by considering the extent of each single need: it is sufficient, it is insufficient, it is short in such and such a quantity—this is the calculation here. Owing to the elasticity of the needs themselves, this calculation does not have f to be very exact. Therefore, the question of the comparative profitability of various expenditures cannot arise—for example, whether growing hemp or grass would be more profitable or advantageous. For these plant products are not interchangeable and cannot be substituted for each other; therefore, no common standard can be applied to them.

According to this, all economics of natural economy, its conception of what is economic and profitable as well as the strange "laws" which dominate its social life, are, we shall prove below, very different in character from the basic ideas and principles of our usual economics which are customarily presented in manuals on the national economy. .Only with the development of an exchange and money economy does managing lose its qualitative character. Now, the interest in mere quantity comes to the fore—the concern to obtain the maximum quantum which can adopt any qualitative form through exchange. As exchange and money circulation (the commodity nature of the economy) increases, quantity becomes more and more independent of quality. It begins to achieve the abstract value of being independent of quality and its specific significance for given demands. The price category becomes prominent, and, together with other categories if these are available, it forms the economic system which is the only one considered by national economics.

A similar fate threatens theoretical economics if any other category drops out of the system—for example, that of *wages.* Even if out c all the possible economic systems lacking this category we choose one in which exchange and credit (and thus the categories of price and capital) are present (for example, the system of peasant and artisan family labor units held together economically by monetary an exchange processes), we shall still find that the structure of such a; economy lies outside the conceptual systems of an economics adapted to capitalist society.

On the family labor farm, the family, equipped with means of production, uses its labor power to cultivate the soil and receives as the result of a year's work a certain amount of goods. A single glance at the inner structure of the family labor unit is enough to realize that it is impossible without the category of wages to impose on this structure net profit, rent, and interest on capital as real economic categories in the capitalist-meaning of the word.

Indeed, the peasant or artisan running his own business without paid labor receives as the result of a year's work an amount of produce which, after being exchanged on the market, forms the gross product of his economic unit. From this gross product we must deduct a sun for material expenditure required during the course of the year; we are then left with the increase in value of material goods which the family has acquired by its work during the year, or, to put it differently, their *labor product.* This family labor product is the only possible category of income for a peasant or artisan labor family unit for there is no way of decomposing it analytically or objectively. Since there is no social phenomenon of wages, the social phenomenon o: net profit is also absent. Thus, it is impossible to apply the capitalist profit calculation.

It must be added, of course, that this indivisible labor product will hot always be the same for all family economic units. It will vary according to market situation, the unit's location in relation to markets, availability of means of production, family size and composition quality of the soil, and other production conditions of the economic unit. But, as we shall learn below, the surplus the economic unit achieves by better location or by relatively better availability of means of production is neither in its nature nor in its amount identical with the rent and the interest on capital of capitalist economy.

The amount of the labor product is mainly determined by the size and composition of the working family, the number of its members capable of work, then by the productivity of the labor unit, and —this is especially important— by the degree of labor effort —the degree of self-exploitation through which the working members effect I certain quantity of labor units in the course of the year.

Thorough empirical studies of the peasant farms in Russia and I other countries have enabled us to substantiate the following thesis: the degree of self-exploitation is determined by a peculiar equilibrium between family demand satisfaction and the drudgery2 of labor itself.

Each new ruble of the growing family labor product can be regarded from two angles: first, from its significance for consumption, for the satiation of family needs; second, from the point of view of I the drudgery that earned it. It is obvious that with the increase in i) produce obtained by hard work the subjective valuation of each newly gained ruble's significance for consumption decreases; but the drudgery of working for it, which will .demand an ever greater amount of self-exploitation, will increase. As long as the equilibrium is not reached between the two elements' being evaluated (i.e., the drudgery of the work is subjectively estimated as lower than the significance of the needs for whose satisfaction the labor is endured), the family, working without paid labor, has every cause to continue its economic activity. As soon as this equilibrium point is reached, how- ever, continuing to work becomes pointless, as any further labor expenditure becomes harder for the peasant or artisan to endure than is foregoing its economic effects.

Our work, as well as the numerous studies of A. N. Chelintsev, N. P. Makarov, and B. D. Brutskus, have shown that this moment of equilibrium is very changeable. It is reached as follows: on the one hand, through the actual specific conditions of the unit's production, its market situation, and through the unit's location in relation to markets (these determine the degree of drudgery); on the other hand, by family size and composition and the urgency of its demands, which determine the consumption evaluation. Thus, for example, each increase in labor productivity results in gain of the same quantity of products with less labor. This allows the economic unit to increase its output and to satisfy family demands in full. On the other hand, the significance of each ruble of gross income for consumption is increased in a household burdened with members incapable of work. This makes for increased self-exploitation of family labor power, so that the family's standard of living, threatened by increased demand, can be kept up in some way.

Starting with the nature of the basic consideration described above, the family labor farm has to make use of the market situation and natural conditions in a way that enables it to provide an internal equilibrium for the family, together with the highest possible standard of well-being. This is achieved by introducing into the farm's organizational plan such labor investment as promises the highest possible labor payment per labor unit.

Thus, the objective arithmetic calculation of highest possible net profit in the given market situation does not determine whether or not to accept any economic action, nor does it determine the whole activity of the family economic unit; this is done by the internal economic confrontation of subjective evaluations. True, some consideration is given to the particular objective conditions of the economic unit.

An economic unit working on the .principles outlined above does not necessarily need to be extravagant in its economic conduct; for *usually* the objects that yield the highest labor payment per labor unit invested and those that guarantee the highest net profit to a capitalist unit are roughly the same. But empirical studies show that in a number of cases the structural peculiarities of the peasant family labor farm make it abandon the conduct dictated by the customary formula for capitalist profit calculation.

Such differences become very clear, for example, in densely populated areas where land shortage does not permit the peasant family to develop its full labor power under optimum organization forms, i.e., forms rendering the highest possible labor payment. For the capitalist economic unit, these optimum forms of economic organization (the optimum state of business intensification is expressed in it) are an *absolute norm.* With each additional intensification, the effect of extra labor input decreases steadily according to the law of decreasing returns to land; consequently, net profit falls as well. In farms greatly short of land, on the other hand, the concern to meet the year's needs forces the family to turn to an intensification with lower profitability. They have to purchase the increase of the total year's labor product at the price of a fall in income per labor unit.

Professor E. Laur, for example, has investigated Swiss farms with little land. These farms trebled their intensity. They suffered a big loss in income per labor unit, but they gained the opportunity to use their labor power; fully, even on the small plot, and to sustain their families. In the same way, small farms in the north and west of Russia increased the growing of potatoes and hemp, which are often of lower profitability than oats but are more labor-intensive and thereby increase the farm family's gross product.

In other words, a capitalist business can only increase its intensity above the limit of its optimum capacity if the changed market situation itself pushes the optimum in the direction of greater intensity. In the labor family unit, intensification can also take place without this change in the market situation, simply from pressure of the unit's internal forces, mostly as a consequence of family size being in an unfavorable proportion to the cultivated land area. The peculiar features of the peasant family labor unit pointed out above inevitably make themselves felt on the whole economic system if it is exclusively based on family economy and, therefore, lacks the category of wages.

This peculiarity is especially clear when analyzing the element of economic rent under the conditions of the labor family unit. Rent as an objective economic income category obtained after deducting material costs of production, wages, and the usual interest on capital from gross income cannot exist in the family economic unit because the other factors are absent. Nevertheless, the usual rent-forming factors like better soil and better location in relation to the market do surely exist for commodity-producing family labor economic units, *too*. They must have the effect of increasing output and the amount of payment per labor unit.

Deeper analysis indicates the following: the family's single indivisible labor product and, consequently, the prosperity of the farm family do not increase so markedly as does the return to a capitalist economic unit influenced by the same factors, for the laboring peasant, noticing the increase in labor productivity, will inevitably balance the internal economic factors of his farm earlier, i.e., with less self-exploitation of his labor power. He satisfies his family's demands more completely with less expenditure of labor, and he thus decreases the technical intensity of his economic activity as a whole.

According to Professors A. N. Chelintsev and N. P. Makarov, this rent factor, which is expressed in a slightly increased level of prosperity, cannot exist for very long, for the regions with such an in- creased level of prosperity will inevitably attract population from less favored regions. This will reduce the land holdings of individual farms, force them to intensify cultivation, and depress prosperity to the usual traditional level.

If in such circumstances the leasing of land and a free land market develop, land prices naturally cannot be determined by capitalizing the rent, since the category of rent itself (as we understand it today) does not exist in the economic system just investigated, as has been shown above. Nevertheless, in a monetary land market properties do not change hands unpaid for. Thus, we are faced with the basic problem of the economics of the family labor unit: What determines the land price? What can the peasant farm pay for land? For what sum will it sell it?-

We can answer these questions if we approach them with the notion of the specific concept of profitability which we have defined for the labor family unit. This shows that tenancy or land purchases are obviously advantageous to the peasant family only if, with their help, the family can reach the equilibrium of its economic unit, either with an increased level of living or with decreased expenditure of labor power.

Peasant farms that have a considerable amount of land and are, therefore, able to utilize the family's whole labor power at an optimum degree of cultivation intensity need not lease or buy land. Every expenditure on it appears irrational to them as it does not increase family prosperity but decreases their resources. If a family can dispose of only a small plot which allows them to use only part of the given labor power, acquiring a new item with a view to using unemployed labor power is extremely significant, for this allows them to bring the unit's intensity nearer the optimum and to utilize working hours previously lost in forced inactivity. In both cases, the increase in payment per labor unit, with the resultant rise in the level of prosperity, can be so important that it enables the family unit to pay for the lease or purchase a large part of the gross product obtained from the newly acquired plot.

We can even maintain, disregarding the apparent paradox that the more the peasant farm will be ready to pay for land, the less it owns already, and, therefore, the poorer it is. In conclusion, we must consider that the land price as an objective category depends on the given situation in the land market, i.e., on the extent and urgency of land demand among peasants with little land and on the number of offers of land available for some reason or other.

In the family labor farm system, the land price level does not depend only on the market situation for agricultural produce and on the profitability of land cultivation resulting from it, but to a greater extent depends on the increase in local rural population density.

Studies on movements in land prices and leases in Russia carried out by Professor V. Kosinskii and the corresponding data from Professor Laur's studies about peasant farms in Switzerland have confirmed that peasants with little land pay land prices that significantly exceed the. Capitalized rent. These data can, therefore, serve as an empirical substantiation of our theoretical proposition.

It is extremely interesting that other mutually dependent economic categories, such as the market rate of interest on capital, behave in an analogous way in the system of the family labor economy, It is obvious that the family labor unit considers capital investment advantageous only if it affords the possibility of a higher level of wellbeing; otherwise, it reestablishes the equilibrium between drudgery of labor and demand satisfaction.

In all cases where prospective new capital expenditure, be it through increased labor productivity or through expansion of the area, promises to achieve this increase in prosperity, the family can pay an unusually high interest for the capital required. Yet, this interest must not be so high that it offsets all the advantages achieved by the new investment of capital. On the one hand, the demand at the moment resulting from this situation, and on the other hand, the supply of capital then available determine the market price in the form of the loan interest normal at that time.

In other words, according to this we must suppose that the circulation of capital" in the family labor unit does not result in an. income from capital in the form of a special objectively available source of income, but it exercises an important influence on labor product and thus on the level of the single indivisible labor product and on the critical moment of internal economic equilibrium. The normal level of the market rate of interest is not determined by the whole productive capital turnover in the country (which obviously does not conform to the classical [Marxian] formula, *M—C—M + m*)[3] but only by the market situation of demand and supply in that part of the nation's capital in the credit system.

Its internal capital circulation is also very peculiar for the family labor unit. If the family does not seek loan credit from outside persons, it will always have to consider not only that each expenditure of capital on the economic unit, by new capital formation and by capital renewal, is advantageous but also that the family will have to be able to find an amount for this expenditure from its labor income, and this would, of course, be at the expense of immediate consumption. Naturally, this will be possible only if the consumption value of the amount intended for production appears in the eyes of the family to be less than its value for production.[4]

It is obvious that the larger its annual product, the easier it is for the family to find from it the means for capital formation. In hard times, with bad harvests or disadvantageous market situations, it will be difficult for the family to extract from its small payment a part intended for consumption in order to use it to form new capital or merely for ordinary replacement of circulating capital.

Thus, the following categories can be defined for the economic system of the labor family unit or, in other words, for the economic structure of a society where production is in the form of peasant and artisan units and where the institution of wage labor is lacking.

1. The single, indivisible labor income of the family which reacts on the rent-forming factors.[5]
2. Commodity prices.
3. The reproduction of means of production (capital formation in the wider sense of the word).
4. Prices for capital in credit circulation.
5. Land prices.

We get an even more peculiar picture if we complicate the form of the family economic unit here under consideration by assuming that there is no category of market price —that is, no factor of commodity exchange. At a quick glance, it would appear that the fully natural family farm would not display any phenomena of an economic kind. A closer look, however, shows that it is not at all like this. It seems possible to find a whole number of social and economic relations in the social and economic bloc consisting of several integral labor farms which meet their demands *in natura*. These control the organization of each of the separate natural farm units and standardize their production structure.

In fact, the internal private economic structure of the individual natural family farms is the same as those of farms with commodity exchange, with the exception of some peculiarities in calculating profitability, which we have indicated at the beginning of this article. The same notion of profitability is the determining factor; it becomes even clearer that it is impossible to apply the profitability formula of a capitalist enterprise. The economic equilibrium between defend satisfaction and drudgery is also determined in the same way. The same can be said about the formation and replacement of means of production. Even if the rent-forming factor of market location is absent here, the various soil and climatic conditions undoubtedly introduce into the system of the natural economic unit something like the factor of rent.

Most significant for the structure of the natural farm is that the intensity of cultivation and its organizational forms depend to a very great extent on the amount of land for use, the size of the labor family, and on the extent of its demand, i.e., on internal factors (family size and composition and its relation in proportion to the amount of cultivated soil). Thus, population density and forms of land utiliza*tion* become extremely important social factors which fundamentally determine the economic system. Another less important, yet essential, social factor is the traditional standard of living, laid down by custom and habit, which determines the extent of consumption claims, and, thus, the exertion of labor power

In other words, if we think of one region of the natural economy and analyze this social and economic bloc, we see that in spite of the lack of interrelationships and in spite of the economic dissociation of the individual economic units a number of complicated economic *processes* take place in this region, the main factor for which is demographic—population density and migration. These determine land utilization, level of prosperity, and, thus, the ever-varying amount of capital accumulation and taxability of the population; the last forms the basis for organizing the nation's state and culture.

Independently of demographic factors, very prosperous regions will stand out where rent-forming factors—higher quality of soil, etc. are especially effective. Empirical studies of seminatural agrarian countries show that the *noneconomic* constraint—in default of a regulating influence from the market situation and its economic constraint—becomes very important in the form of administrative control of land utilization and sometimes in the form of the "warlike settlement" of population migration.

Thus, even in a country with an absolutely natural economy structure we can find the following social and economic categories determining the structure of the individual economic units.

1. The indivisible labor product of the family, constituted according to: (a) population density;

(*b*) the habitual, traditional demand level; (c) the rent-forming power of better soil and more favorable climatic conditions.

2. The population's capacity to form capital and its taxability, depending on the level of prosperity.
3. The economic and political measures of the state power which by noneconomic constraint controls the mode of land utilization and popular migration.

In complete contrast to the family economic system is another type of economy which also lacks the category of wages —the slave economy system. The difference become quite distinct when we confront the structures of their two economic units in respect of their private economic morphology. The peasant and the artisan manage independently; they control their production and other economic activities on their own responsibility. They have at their disposal the full product of their labor output and are driven to achieve this labor output by family demands, the satisfaction of which is constrained only by the drudgery of the labor. None of these factors exists in a slave economy.

The slave labors in a production dominated by a stranger's will; he is only a blind tool and has no right to dispose of his labor product. He is driven to labor output only by threat of punishment and satisfies his demands at the discretion of his owner only as much as is necessary to maintain his labor power.

For the slave-owning entrepreneur, keeping slaves is rational only when it leaves him a surplus product after deducting expenses and the expenditure of keeping the slaves; this, after being realized on the market, makes for an objective income from slave-keeping. *Niebuhr* pointed out that the institution of slavery came into existence only at the moment when the productive power of human labor had developed so far that this surplus product could be achieved.

The expenditure on keeping slaves is determined by physiological norms and by the labor tasks allotted; it cannot be taken as an economic category behind which hide complicated social and economic relations analogous to those connected with the category of wages. Therefore, the slave hardly differs from the beasts of burden as far as organization of the enterprise is concerned if we disregard the ethical norms shaping patriarchal life which were of special significance, for example, in Muslim slavery.

The peculiar features of the private economic organization of a slave enterprise pointed out above affect a whole number of fundament economic categories. The slave owner receives a certain sum as income after deducting from the gross product of his enterprise the material costs of production and the expenses of keeping the slaves. When the customary interest calculated on invested fixed and circulating capital, but not on the value of the slaves, has been deducted, the rest can be attributed to slave utilization.

In capitalist society, this residual attributed to the worker would *be* that part of his wages exceeding the value of board, clothing, and housing provided in kind by the entrepreneur. In the slave economy system, the part of the product attributed in economic terms to slave labor is not taken by the slave but by his owner on the strength of his slave ownership; it becomes a new sort of unearned income which is the raison d'être for slave-owning.

This income, which is no longer a mere technical norm as, for example, is the cost of maintaining slaves, is determined by a complicated structure of a whole number of social and economic interrelations. It is an economic category and constitutes the *slave rent* the owner receives on the strength of his property right. If the slave economic unit is agrarian, the unearned income from slave-owning will grow, together with the progression from less advantageous conditions of production and transport to relatively more advantageous ones. Since the slave and his labor output remain the same and the slave-keeper's income would not fall by substituting some slaves for others, the extra income we are examining here cannot be connected with slave-owning as such but must be attributed to the soil and results from its better quality or more advantageous market location, and it has to be considered as ordinary differential rent. Insofar as it is possible to achieve the same technical results based on slave labor as those on paid labor, this economic rent will also correspond quantitatively to that of capitalist agriculture.

Thus, all the social and economic categories of the capitalistic economy can retain their places in the theoretical system of the slave economy; it is necessary only to substitute the category of slave rent for that of paid labor. The slave rent is appropriated by the slave owner, and its capitalized value constitutes the slave price as an objective market phenomenon.

The quantitative amount of the slave *rent* is determined by the productivity of his utilization, analogous to the determination of wages by the productivity of the marginal worker as calculated by Anglo-American theoreticians in their systems. The quantitative determination of the *market price* for a slave is more complicated. We have already pointed out that it tends to be an amount similar to the capitalized rent of the marginal slave. In a way, this is the demand price, while, on the other hand, the prime cost of "slave production" forms the supply price. In this context, we must distinguish between two systems of slave economy.

1. A system in which the supply of slave material occurs by capturing in war from foreign peoples slaves who are already adult. The exploitation of their labor is complete and leads to its quick consumption; this avoids the cost of raising children (reproduction), as well as prolonged maintenance of the adults.
2. A system in which the supply occurs in a natural way by reproduction of slave material within the slave family itself; this, of course, necessitates costs for raising the coming generation, as well as for the reduced degree of exploitation of slave labor power, especially that of the female part.

In the first case, the prime cost of slave production is the cost of capture; in the second, the cost of raising and educating, which, as a rule, is much higher. In historic periods favoring capture of human material in war —as in ancient Rome, in the Middle Eastern states of antiquity, and even, for the first decades, in Spanish America— the prime cost —the cost of slave production— was very low. The customary capitalized slave rent surpassed it many times. Good evidence for this is the high market price of the Spanish crown's slave patents with which it issued licenses for the capture and importation of slaves during the first period of the importation of Negroes into America.

The human material was cheap, and this allowed ownership to increase in extent and allowed slaves to be used for work with ever- decreasing labor productivity, up to the point, of course, where the steadily falling slave rent became identical with the prime cost of acquiring them. This factor determined the market price of the slave and the extent of a slave-based economy. As the sources for capture of slaves in war became exhausted by frequent attacks, the prime cost of acquiring slaves grew; their market price increased quickly, and many slave uses that generated a small slave rent were no longer profitable and were gradually dropped. As a result, the slave-based economy decreased in extent.

From this, we can conclude that an important factor in the decline of the ancient system of slavery was that in order to insure the supply of slave's war and capture had to be abandoned for peaceful production by means of natural reproduction. Here, the ancient economic unit faced prime costs so high that they started to overtake the capitalized slave rent.

In any case, the slave price, as a phenomenon subject to the laws of the market, is an objective category which determines slave production in a private economic calculation. It is obvious that the slave economic unit, from the private economic viewpoint, can appear advantageous only as slave production yields a net product that does not amount to less than the slave rent that exists at the time as an objective economic fact and, through the market, is realized in the slave price.

We must also stress that slavery or, to put it more generally, human bondage as an economic phenomenon displays a number of variations differing widely from one another. Thus, for example, Russian serfdom in its quitrent form differs very much from the system described above.[6] The quitrent form, a peculiar combination of a family labor farm and a slave farm, is of extraordinary theoretical interest

The farm of a quitrent peasant was organized in the form usual for family labor unit. The laboring family dedicated its whole labor power only to its own agricultural or other economic activity. But a noneconomic constraint forced such a unit to hand over to the owner, of the laboring serf family a definite amount of the produce won by its labor. This amount was called quitrent *[obrok]* and represented the serf rent.

Despite similarities in the legal position of slave and serf, the economic structures of the slave economic unit on the one hand and the serf economic unit on the other hand are of a completely different nature. Quitrent neither qualitatively nor quantitatively coincides with slave rent.

In its internal private economic structure, the farm of a serf quit- rent peasant is in no way different from the usual form of the family labor unit we already know. In this regime, the family runs its own farm on its own responsibility and has the resulting produce at its disposal. The family is stimulated by its needs to force up its labor power, and the quantity of the product is determined by the equilibrium, peculiar to the family labor farm, between the amount of the family's drudgery and the degree of its demand satisfaction. In the quitrent system, however, the family is forced by noneconomic factors to reach this equilibrium in such a way that the product obtained not only meets its own demands but also the quitrent to be paid to the owner.

Therefore, the demand for material values is much higher compared with the free peasant farm. As a consequence, the equilibrium between the amount of labor drudgery and the degree of demand satisfaction is achieved with a much higher degree of self-exploitation of labor than in the free peasant farm. Yet, the increased labor input mentioned above will not yield so great an additional product as the quitrent requires; thus, part of it must inevitably be covered at the cost of the family's demand satisfaction. Consequently, the family paying quitrent has a lower level of wellbeing than the free peasant family.

By paying quitrent to the landlord, partly at the price of an increased labor effort, partly at the price of a lower degree of demand satisfaction, the serf farm creates another economic income category— the unearned income from serf ownership, the serf rent. Disregarding this rent payment, the farm paying quitrent remains in all other aspects an ordinary family labor unit with all the peculiar organizational features pointed out above.

If we want to turn to the factor determining the amount of the quitrent, we must start off with its particular nature. The amount of quitrent brought in by means of noneconomic constraint is determined by the will of the owner. It is in his interest to maximize the quitrent; the only natural barrier is the danger that the serf farm may be ruined and thus be deprived of its ability to pay.

The amount of quitrent can be considered normal as long as it is paid at the cost of the serfs' increased labor input and a lowering of their consumption, but not at the cost of upkeep and necessary capital renewal. If pressure from paying the quitrent brings capital renewal on the farm to a standstill, the quitrent system begins to destroy its own roots.

Those quitrent-liable farms that are in relatively better rent-forming conditions are, of course, able to pay relatively much higher amounts to their landlords. Such an increase in quitrent cannot be attributed to human labor input but to the soil, and it constitutes ordinary differential rent.

In a free land and serf market, that part of the quitrent attributed to the soil and forming the rent derived from the soil is capitalized and produces the land price; the remainder, attributed to serf labor and forming the serf rent, is capitalized and produces the serf market price. It seems unnecessary to prove that the serf rent is determined by the ability of the marginal peasant, producing under unfavorable conditions, to pay the quitrent, while the differential rent is in such circumstances determined by the difference between the marginal peasant's ability to pay and that of any other peasant farm. Considering the great qualitative difference in the ways the quitrent and the slave rent are formed and pa id, as well as the difference in the production organization of the large-scale slave economic unit and the small-scale serf unit, we cannot expect that serf rent and slave rent will be quantitatively the same.

Differences in the process of price formation for serfs on the one hand and slaves on the other are still greater. We have already pointed out that the prime cost of slave acquisition plays a considerable part in forming the slave price. With the quitrent serf economic unit, however, the owner has no economic costs in reproducing the human material. Therefore, the number of serfs is not determined by the equilibrium between the serfs [67] marginal product and the marginal prime cost, as is the case in the slave economic unit; the increase through procreation, and thus the number of serfs, is left to themselves. Consequently, the ability to pay and, thus, the rent of the marginal serf is determined by the actual number of serfs in a certain country at a certain time.

What has been said above is sufficient for a morphological description of the quitrent farm. By confronting this system with the economic type of the slave farm, we can convince ourselves by illustration that both systems differ completely and are determined by very different objective elements in their economic relations, in spite of some exterior legal similarities.

This confrontation makes clear the fundamental differences in the two types of economy. It is to be noted that both systems are also quite different in their conception of profitability and economic calculation.

ECONOMIC CATEGORIES IN THE SLAVE AND QUITRENT SYSTEMS

Slave Economic System	**Quitrent Serf Economic System**
1. Commodity prices. 2. Capital, which is advanced by the slave owner and circulates in capitalist form in the production process *(M—C—M+m)*. Part of this capital is the cost of maintaining the slaves. 3. [Maintenance cost of slaves— not an economic but purely a natural category.] 4. Profit from capital (interest). 5. Slave rent. 6. Slave price. 7. Differential rent. 8. Land price.	1. Commodity prices. 2. [Capital goods in the possession of the serfs (production takes place in the forms of the labor family economic unit, cf. p. 4 ft.); not an economic but purely a natural category.] 3. Indivisible labor product of the family. 4. Interest on borrowed capital. 5. Serf quitrent. 6. Serf price. 7. Rent like income which the landowner receives due to the effect of rent-generating factors on the amount of the quitrent. 8. Land price.

The entrepreneur in the slave economic unit comes close to a slightly changed formula of capitalist profitability calculation as regards the concept of profitability for his enterprise. On the outgoings account, in place of wages he puts the technically and physiologically determined cost for slave maintenance. He divides his net product into three heads: interest on capital, rent, and slave rent.

It is completely different in the serf economic unit that pays quit- rent. A very peculiar feature of this unit is a certain division of the economic subject in which the peasant family concept of profitability is in the form we find in the family labor unit; apart from this, the calculation of the man who owns serfs and land is that of a typical rentier and expresses the search for a capital investment as profitable as possible.

The difference in the nature of the quitrent and slave economic units pointed out above leads to two very peculiar economic consequences. The owner of peasants paying quitrent has property rights and claims to rent, but at the same time, unlike the entrepreneur of the slave economic unit, he does not have his own production unit. This fact becomes clear in the peculiar and interesting way the quit- rent is to large extent subject to the influence of demographic factors, whereas rent in the slave economic unit is independent of them.

Moreover, in the organization of the slave economic unit the number of slaves can be and is adapted to the unit's optimum labor demand, i.e., that optimal degree of intensity promising the maximum slave rent. In the serf's economic unit, however, the relation of available labor power to the amount of cultivated land cannot so easily be directed toward an optimum by the owner of the land and the peasant, because, disregarding rare exceptions, the population movement in this regime is of a purely natural and elemental character. Therefore, we have here the possibility of relative overpopulation, which, we have already pointed out in our analysis of the family labor economic unit, causes intensification beyond the optimum and decreases the population's level of living as well as its ability to pay tax.

As a result, we get the peculiar phenomenon of negative overpopulation rent which eats up a large part of the quitrent. The only way out of this state of affairs is to move part of the serf population from the overpopulated land and to use them to colonize sparsely populated areas. In this case, of course, we get a marked increase in serf rent yielded by the transferred population, which has now achieved an optimum relation to land. Together with rent, the serf price resulting from the capitalization of the rent increases. This makes every population and colonization movement very advantageous, both for the owner of a quitrent economic area and for the peasants concerned.

Concluding our confrontation of the slave and the serf economic units, we would like to stress most emphatically that given the same market situation and the same natural and historical conditions the rents achieved in both cases (that of the slave and of the serf) are not always of the same magnitude; rather, they can differ considerably in level. To go into all the details of this extremely interesting problem would require mainly an empirical analysis of extensive material. Hence, we confine ourselves to mentioning in accordance with that difference that in old Russia of the serf epoch we are able to recognize, regions with a predominantly quitrent form of economy and others where *labor rent* was dominant, which meant economically a certain trend to slave economy organization. In course of time, these regions I changed their geographical outlines under the pressure of various factors. At times here, at times there, the slave rent respectively fell below or rose above the serf quitrent; adapting themselves to these changes, landlords transferred their peasants, according to the market situation," from labor rent to quitrent and vice versa.

The imposition of a fief system on an agrarian natural economy region, a frequent occurrence in history, is of great interest for theoretical analysis. This is a special form of feudal economy in which the basic stratum of primary producers —the tributary peasants— continues to be in a completely natural economy and pays tributes to the feudal lord in kind, while the recipients of the tributes —the dukes, counts, monasteries, etc. — "realize" as commodities on distant markets the economic rent and serf rents they have drawn off in kind.

In this system, with a general economic structure corresponding to the type of the quitrent serf economy we have just investigated, price formation for those products collected by the feudal lord in the form of payment in kind and realized on distant markets is especially interesting. Obviously, the cost-of-production element cannot play any part m this, unless one regards as a prime cost the upkeep of a (noneconomic) coercive apparatus to collect tribute and suppress rebellion.

We know that the owner of a serf paying quitrent and of a feudal tenure takes very little part in the actual organization of production. The amount of produce that forms his feudal rent is for him an amount given in kind, limited by the tribute-paying capacity of the estate's dependent population, and this cannot be forced up with impunity. However, the feudal lord can, to a certain extent, initiate changes in the composition of produce collected from the dues-paying population as payment in kind. He will try to adapt them to the market situation. But, considering the limited flexibility of peasant farms, significant barriers also hinder this form of the feudal lord's economic activities. Therefore, the economic activities of the feudal lord and his intervention on the market are almost always condemned to be passive. The prices of his goods are not connected with their production and are wholly determined by the receptiveness of the market; they are realization prices of a given amount of certain commodities:

Given this particular exchange and monetary orientation, the *rent* going to the feudal lord on the strength of his feudal tenure is dependent not only on the amount of payment in kind but also on the market situation for selling the products received. Fluctuations in the market situation can, in spite of a constant amount of payment in kind, favorably or unfavorably influence the rent and, thus, the price of the tenure. The only possible economic activity of a feudal lord must, therefore, be confined to certain measures of an economic and political kind which seem appropriate to him for increasing his tenants' prosperity and, thus, their ability to pay taxes.

Besides these five main types of economy organized in a noncapitalist way, there have been in our economic past, and are still, a whole number of other forms, both transitional and independent. Thus, in the broad grouping of peasant agriculture we can distinguish between the family labor farm type and the half-labor farm (farmer unit[8]), which uses paid labor in addition to family labor power, but not to such an extent as to give the farm a capitalist character. Theoretical Study of this case shows that the presence of the wages category some- what changes the content of the labor farm's usual categories but does not entirely succeed in substituting for them the categories of a capitalist farm.

Without doubt, it must also be admitted that labor in Russia's serf epoch did not mean slavery in the sense of negro slavery in America, nor only that of the ancient world, even though it may have approximated to it and though the economic laws regulating the labor rent no longer coincide with those we pointed out for the quitrent serf *farm.* Neither can we fit the household of antiquity *[Oikos]* into the framework of any of the pure economic types we have studied.

The trustification of capitalist industry now progressing and developing, as well as the forms of state and municipal capitalism recognizable at the beginning of the twentieth century, most probably will not fit into the finished scheme of classical theory of the economy but will demand revision of doctrines. Very interesting complications must also result for economic theory from the system of agricultural cooperatives rapidly evolving before our eyes. Yet, we prefer to confine ourselves to what we have already said; the analysis made of the five different economic types is sufficient to clarify the inapplicability of the customary categories of national economics to all instances of economic life. It cannot be the task of this short article to give a complete theory of noncapitalist economic forms.

We must make one exception for an economic system that has not yet found its full realization but, to a great extent, has attracted the attention of our contemporary theoreticians. We are talking of the system of state collectivism or communism as regards the way in which its foundations have been evolved in the treatises of its theoreticians and the attempts to realize it which have taken place at various epochs in the course of human history.

Unfortunately, in their critique of capitalist society Marx and the more significant of his adherents have nowhere fully developed the positive fundamentals of a socialist economy's organizational" structure. Thus, we ourselves must try to build a theory of such a structure by taking as a starting point some of Marx's observations in *La misère de la philosophie*[9] as well as some studies by N. Bukharin and E. Varga and, most of all, the ideas that have been effective in the practical attempts to create a communist society in various European states during the period 1918-20.

According to these attempts, communism is an economic system in which all the economic fundamentals of capitalist society—capital interest on capital, wages, rent—are completely eliminated, while the whole technological apparatus of the present economy has been preserved and even further improved.

In the communist economic order that must fulfill this task, the national economy is conceived as a single, mighty economic unit of the whole people. The people's will directs through the state organs, its tools, and the state administers the economic unit according to a unified economic plan that fully utilizes all technical possibilities and all favorable natural conditions. Since the economy is conceived as a single unit, exchange and price as objective social phenomena drop out of the system.[10] Manufactured products cease to be values with meaning in a money or exchange sense; they remain only goods distributed according to a state consumption plan. The whole peculiar economics of this regime is reduced to drawing up state plans for consumption and production and to establishing an equilibrium between the two.

The exertion of social labor power is here, obviously, as in the family unit, taken to the point where the equilibrium between drudgery of labor and social demand satisfaction has been reached. This point is, obviously, fixed by those state organs that work out the state production and consumption plans and must bring the two into harmony. Since each individual worker's standard of living determined by the state has no connection, if taken by itself, with his labor output (the amount of production he achieves), he has to be driven to labor by his social consciousness and by state sanctions, and perhaps even by a premium system.

In contrast to all the economic systems hitherto discussed, which can exist purely automatically and elementally, a communist economic order requires for its maintenance and continuation in accordance with the state plan a continuous social exertion and, to prevent the rise of economic activity not intended in the state plan, a number of *economic* and noneconomic sanctions. According to this, we do not get here in the system of state communism a single one of the economic categories set out in the analysis of the economic systems we earlier considered. An exception is the purely technical process of production and reproduction of means of production.

Our presentation, which lays bare the morphology of the system, contributes little to understanding its dynamics, but achieving this is probably impossible before observation of the regime and how it functions, and before its ideologists and theoreticians have provided a fully developed theory of organization.[11]

Summing up the results of our analysis, we obtain the following table that tells us for each of the various economic systems studied here which categories are lacking and which are present.

Having summed up in this table the systems of economic categories we have presented, we are able to deduce from our analysis certain theoretical conclusions.

First of all, we must take as an unquestionable fact that our present capitalist form of economy represents only *one* particular instance of economic life and that the validity of the scientific discipline of national economics as we understand it today, based on the capitalist form and meant for its scientific investigation, cannot and should not be extended to other organizational forms of economic life. Such a generalization of modern economic theory, practiced by some contemporary authors, creates fictions and clouds the understanding of the nature of noncapitalist formations and past economic life.

	Family Economy				***Feudal System****			
Economic Categories	*Capitalism*	*Commodity Economy*	*Natural Economy*	*Slave Economy*	*Quitrent Serf Economy*	*Landlord Economy*	*Peasant Economy*	*Communism*
Commodity price	+	+	—	+	+	+	—	—
Single indivisible family labor product	—	+	+	—	+	—	+	—
Technical process of production or reproduction of the means of production …..	+	+	+	+	+	—	+	+

Capital advanced by the entrepreneur and circulating in production according to the formula M—C—M+m ……..	+	—	—	+	—	—	—	—
Interest on capital in the form of rentier's income ………...	+	+	—	+	+	+	—	—
Wages	+	—	—	—	—	—	—	—
Slave rent or serf rent	—	—	—	+	+	+	+	—
Slave price or serf price	—	—	—	+	+	+	—	—
Differential rent	+	+	—	+	+	+	—	—
Land price	+	+	—	+	+	+	—	—
State production plan ………	—	—	—	—	—	—	—	+
Regulation by noneconomic constraint necessary to maintain the regime ………..	—	—	+	+	+	+	+	+

Some scientific circles have obviously become aware of these facts, and recently it has often been said that it is necessary to establish a universal economic theory, the concepts and laws of which would embrace all possible formations of human economic life. We shall try to clarify the question of whether it is possible to construct such a universal theory and whether it is necessary as a tool for scientific understanding.

First, we shall compare the various kinds of economic formation we have previously investigated and sort out the principles and phenomena common to all. We obtain five

1. The necessity to equip human labor power with various means of production for the purpose of organizing production, and to devote part of the annual output of production to the formation and replacement of means of production.
2. The possibility of considerably Increasing labor productivity by applying the principle of division of labor both as regards technique of production and in the social sense of the word.
3. The possibility of running agriculture with different amounts of labor exertion and with different amounts of concentration as far as means of production per unit of soil area are concerned, and to increase by intensifying farm activity the amount of produce per unit of soil area and per labor unit. It must be taken into consideration that the product does not increase so quickly as the labor and means of production inputs.
4. The increase in labor productivity and in the amount of produce per unit of soil area per unit of soil area resulting from better soil quality, more favorable surface configuration, and more favorable climatic conditions.

5. The opportunity, provided by a relatively high level of human labor productivity, for a laboring man to produce in the working year a larger amount of products than is necessary to maintain his labor capacity and to secure his family's opportunity to live and reproduce. This circumstance is the presupposition for the possibility of any social and state development.

Looking closely at these five universal principles of man's economic activity, we notice without difficulty that they are all phenomena of a natural and technical order. It is the economics of things in kind *(in natural)*.

These phenomena, even though often ignored by economic theoreticians and considered by them interesting only from the point of view of production *technique,* are extremely important. Now, in the chaos of the postwar period, their whole significance is revealed especially distinctly, since the complicated structure of the economic apparatus of capitalist society has been destroyed, and money has lost the quality of an abstract, stable expression of value.

The five principles we have brought forward do not contain an element for evaluating things. If this evaluation should once emerge and the social and economic phenomenon of objective value be created on its basis, all things would adopt, so to speak, a second mode of existence. They would become values, and the production process would acquire, besides the expression *in natura,* the new expression *in valore.*

Then only would emerge all the economic categories stated by us above. These would join together, in accordance with the social and legal structure of the society, in *one* of the particular value economic systems which we have analyzed. The "valoristic" system with its categories takes over the prior, natural production process and submits everything to its characteristic economic calculation in value terms.

Each of these systems is very individual in its nature. Attempts to cover them by any generalizing universal theory could yield only very general doctrines void of content, e.g., the ideal type "exaggerating" way of stating that in all systems the economic unit strives for the greatest possible effect with the least input, or analogous phrases.

Therefore, it seems much more practical for theoretical economics to establish for each economic regime a particular national economic theory. The sole difficulty in carrying out these ideas is that only very rarely in economic life do we come across any economic order like a pure culture, to use a term borrowed from biology. Usually, economic systems exist side by side and make for very complicated conglomerations.

Even today, significant blocs of peasant family labor units are interspersed in capitalist world economy. Economic formations that resemble slave or feudal economic types are still interspersed in the colonies and the states of Asia. Analyzing the economic past, we more frequently, one may say constantly, come across the fact of such coexistence, sometimes the beginnings of capitalism together with the feudal or serf system, sometimes the slave economy next to serfdom and the free family labor economy, etc.

In these cases, since each system was a closed one it would communicate with the others only by those objective economic elements they had in common, as shown in our table of economic systems. This contact usually occurred on the plane of commodity and land market prices. Thus, for example, from the peasant emancipation (1861) to the Revolution of 1917, the peasant family farm existed in Russian agriculture alongside capitalist large-scale enterprise. This led to the destruction of capitalism because the peasants, relatively short of paid more for the land than the capitalized rent in capitalist agriculture. This inevitably led to the sale of large landed property to peasants. Conversely, the high ground rent achieved by the large capitalist sheep farm in eighteenth-century England caused the plundering of peasant tenancies, which were not able to pay the same high rent to the estate owners.

Just as characteristic is the substitution of labor rent by quitrent and vice versa during certain periods of Russian serfdom. This was caused by the raising of slave rent over quitrent and vice versa. And perhaps the economic cause for the abolition of slavery has to be sought in the fact that the rent of the capitalist economic enterprise based on wage labor exceeded the amount of rent and slave rent. These as well as a number of analogous examples remove any doubt about the preeminent importance of the problem of coexistence among different economic systems. Today, our world gradually ceases to be only a European world. As Asia and Africa enter our lives and culture more and more often with their special economic formations, we are compelled to turn our interest again and again toward the problems of noncapitalist economic systems.

Therefore, we have no doubt that the future of economic theory lies not in constructing a single universal theory of economic life but in conceiving a number of theoretical systems that would be adequate o the range of present or past economic orders and would disclose the forms of their coexistence and evolution.

NOTES

1 The terms, family economic unit, labor economic unit, family labor economic unit, , and labor family economic unit, in this article mean the economic unit of a peasant or artisan family that does not employ paid workers but uses solely the work of its own members, even where this characteristic has not been explicitly stated.

2 Editors' note.—Chayanov introduced a Russian term, *tyagostnost'*, to indicate labor inputs *as* subjectively assessed by the peasant. The term might be translated by "laboriousness" or "irksomeness," but "drudgery" seems preferable and has the advantage of being etymologically parallel to the Russian form. *(Cf.,* the Glossary, *Drudgery of Labor*.)

3 Editors' note.—The formula ***M—C—M'*** comes from Vol. I of Marx's ***Capital,*** Part II, ch. iv. ***M*** = Money, C = Commodities, and M' = the original sum advanced, plug an increment.

4 The cooperative confrontation of the subjective evaluations of the consumption and production value of the nth unit of the labor product is among the most complicated problems in the family labor unit theory; it is thoroughly dealt with in the fourth chapter of my book; *Die Lehre von der*

bäuerlichen Wirtschaft (Berlin: P. Parey, 1923). *[Translator's note.*—Cf. Chapter 5 of *Peasant Farm Organization, p.* 195 of the present volume.] In our analysis, we take as a measure of production value that degree of drudgery which has to be suffered if the nth unit of income is not used for capital renewal or formation.

5 We number this single indivisible labor income of the family among the economic categories because it is determined not only by technical but also by a whole range of social factors: the development of a habitual traditional level of demand, the local population density, and, finally, the particular rent-forming factors.

6 Russian serf law distinguished three different sorts of serfs. (1) They could be in servants *(dvororvye),* i.e., destined to meet the needs of the landlord's household, the landlord himself, and his family by personal domestic service, or, without running their own farms, to be used on the demesne [home farm] insofar as that existed on the manor. (2) They could be paying labor-rent *(barshchina)*, i.e., managing their own farms but at the same time obliged to render services on the landlord's estate in the fields or in the manor on a certain number of weekdays. (3) They could be quitrent peasants, i.e., using their labor power on their own holding but obliged to pay part of their produce § to the landlord.

7 Translator's note.—The German text reads slaves'.

8 Translator's note.—*Halbarbeitswirtschaft* or *farmerwirtschaft.* See Farmer unit in the Glossary.

9 Translator's note.—The Poverty of Philosophy.

10 Taxes are not prices in the sense of an economic phenomenon subject to its own laws.

11 It seems to me that we must wait for the theory of organization to give the answers to the following three questions, the solutions of which might make more specific the notions of the mechanism of socialist economics.

1. With the help of which method and according to what principles will the degree of social labor exertion and the required amount of demand satisfaction, as well as the necessary equilibrium between the two, be determined when state ' production and consumption plans are established?
2. By what means is the individual worker to be driven to labor so that he does not consider as drudgery the input expected of him under the production plan and really carries it out in practice?
3. Which measures make it possible to prevent in the socialist society on the basis of new production relations the danger of a new class stratification being created that might start forms of distributing the national product which would deprive the whole regime of its original high ideals?

Without solving these problems, the regime of socialist economy can be sketched only in its most general morphological form.