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✓ Chayanov and the Theory of Peasantry as a Specific Type of Economy

An original paper.

For some decades after its establishment in the 1870s the Russian provincial administration (the *zemstva*) conducted a series of detailed surveys of the peasantry, published in more than 4000 volumes. On the basis of this extensive literature there emerged a flourishing school of agricultural economists who continued to play an influential role in Russia up to the end of the NEP in the 1920s. Their main aim was to help the peasant modernize his farming techniques. In contrast with Populists and Marxists both of whom saw the agrarian problem in terms of property relations, they felt that land redistribution was an insufficient palliative (and implied a social upheaval whose consequences could not be predicted). They stressed the need to transform the entire organization of peasant agriculture by a series of essentially 'Western' innovations such as co-operatives, stock selection and the use of fertilizers etc. Hence the reason why they have been called 'the organization and production school'. Among them were A. Chelintsev, A. Chayanov, N. Makarov and many more.

Kossinsky (1906, p. 165)¹ and Brutskus (1913) of that group were the first to contrast the peasant and capitalist economies not so much on the political plane as on the plane of economic theory.

But, it was Chayanov's genius to formulate, from *zemstva* data,

1. 'The peasant, by providing simultaneously land and labour, does not differentiate the value created in the process of production between costs of production and surplus value. All the value thus created returns to him to be used as a whole and is the equivalent of wages and the capitalist's surplus value. This is why the idea of surplus value and of interest on capital is foreign to him. He considers his net income as the product of his own labour.'

the theory of a specific peasant economy (i.e. peasant ownership but *without hired labour*) as an economic system *sui generis*. He tried to show that to the distinctive categories and modes of production Marx had recognized (slavery, feudalism, capitalism, socialism) there should be added another: the peasant economy.

Alexander Vasil'evich Chayanov was a man of wide interests. He wrote not only in the realm of economics and rural sociology but also in art, history and literature.² He became, after the Revolution, director of the Institute of Agricultural Economy. But as Soviet agricultural policy drew to an extensive collectivization he was increasingly attacked as a petit bourgeois idealizer of peasant economy and a pro-*kulak* ideologist. In 1930 Chayanov was arrested and he died in 1939.

Chayanov's main contribution was firstly to provide a theory of peasant behaviour at the level of the individual family farm, and secondly to show that at the national level peasant economy ought to be treated as an economic system in its own right, and not, as the Marxists claimed, as a form of incipient capitalism, represented by petty commodity production. In Chayanov's view peasant motivations are different from those of the capitalist; they aim at securing for the needs of the family rather than to make a profit. That is why a central role is given in Chayanov's theory to the notion of balance between subsistence needs and a subjective distaste for manual labour (dis-utility) for this determines the intensity of cultivation and the size of the net product.

Chayanov proceeds to show that the prevailing concepts of classical economics as well as the marginalist theory explaining the behaviour of a capitalist entrepreneur do not apply in a peasant family which depends solely on the work of its own family members.³ For in this type of farm the decreasing returns of the value of marginal labour do not hinder the peasant's activity so long as the needs of his family are not satisfied; i.e. that is, when

2. Several of Chayanov's studies have been published in German, in English (Chayanov, 1925) and Japanese. Eight volumes of selected studies by Chayanov are available in Russian: *Oeuvres choisies de A. V. Chayanov* (1967).

3. For the same reason, according to Chayanov, the accounting methods used in Western Europe at the time – see for example Laur (1904) – do not apply in weakly monetized economics like those in Russia.

an equilibrium has been achieved between needs and the drudgery of his effort.

All the principles of our theory, rent, capital, price and other categories have been formed in the framework of an economy based on wage labour and seeking to maximize profits. . . . But we must by no means extend its application to all phenomena in our economic life. 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-labour and wages. 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 a natural economy human economic activity is dominated by the requirement of satisfying the needs of a single production unit, which is, at the same time a consumer unit; therefore budgeting here is to a high degree *qualitative* . . . quantity here can be calculated only by considering the extent of each single need. . . . Therefore, the question of 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.

On the family farm, the family equipped with means of production uses its labour 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 labour unit is enough to realize that it is impossible, without the category of wages, to impose on its structure net profit, rent and interest on capital as real economic categories in the capitalist meaning of the word. . . . Thus it is impossible to apply the capitalist profit calculation (Chayanov, 1925, pp. 1–5).

Chayanov saw no validity in circumventing the absence of wages by imputing values to unpaid family labour. The annual product minus outlays is indivisible and undifferentiated. It could not be broken down into wages and other factor payments.

The family labour product (the increase in value of material goods which the family has acquired by its work during the year, or, to put it differently, their labour product) is the only possible category of income for a peasant or artisan working family unit. . . . The amount of labour product is mainly determined by the size and the composition of the working family, the number of its members capable of work,

then by the productivity of the labour unit and – this is especially important – by the degree of labour effort, the degree of self exploitation through which the working members effect a certain quantity of labour units in the course of the year. . . . Thorough empirical studies on peasant farms in Russia and 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 drudgery of labour itself. . . . It is obvious that with the increase in produce obtained by hard work the subjective valuation of each newly gained rouble'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 soon as the equilibrium point is reached continuing to work becomes pointless. . . . Farm size and composition and the urgency of its demands determine the consumption evaluation. . . . The significance of each rouble gross income for consumption is increased in a household burdened with members incapable of work. This makes for increased self exploitation of family labour power. . . . Thus the objective arithmetical calculation of the highest possible net profit in the given market situation does not determine the whole activity of the family unit: this is done by the internal economic confrontation of *subjective evaluations* (Chayanov, 1925, pp. 5–7).

The peasant producer would make an increased effort only if he had reason to believe it would yield a greater output which could be devoted to enlarged investment or consumption, but he does not push the drudgery beyond the point where the possible increase in output is outweighed by the irksomeness of the extra work. That is why this social mechanism has been called labour-consumer balance. Chayanov showed how, for different families, the balance between consumer satisfaction and the drudgery involved is affected by the size of the family and the ratio of working members to non-working members, and analysed effort curves and consumption-demand curves. He calculated also in what conditions the machine is preferable to manual labour for a peasant economy. He particularly emphasized the fact that calculations of the limits of possible land improvements for peasant economies must take into account the cost of the land and ~~not the foreseeable increase in the rent~~, for in a peasant economy the prices agreed for the purchase of land or for land improvements are not set at the level represented by the capitalization of

the rent as in a capitalist economy. That is why Chayanov concluded that the practical range of land improvements is larger for a peasant than for a capitalist economy.

In the capitalist economy land and labour are the variable factors which the entrepreneur tries to combine to obtain the maximum remuneration from his capital, considered as a fixed factor. In a typical peasant economy labour, proportionate to the size of the family, is the stable element which determines the change in the volume of capital and land.

For the capitalist entrepreneur the sum of values that serves to renew the work force is, from his private economic view-point, indistinguishable from other parts of the capital advanced to the undertaking, and is determined by the objective national economic category of wages and number of workers required for the particular volume of activity. This in its turn is determined by the total size of entrepreneur's capital (Chayanov, 1925, p. 197).

It is obvious that the family labour unit considers capital investment advantageous only if it affords the possibility of a higher level of well-being; otherwise it re-establishes the equilibrium between drudgery of labour and demand satisfaction (Chayanov, 1925, pp. 10-11).

Our analysis of the on-farm equilibrium's influence on capital circulation on the family farm enables us to formulate the following propositions:

At any particular level of technology and in a particular market situation, any working family unit able to control the amount of land for use can increase its labour productivity by increasing to a certain level optimal for this family. Any forcing up of capital intensity beyond the optimum increases labour drudgery and even reduces its payment, since, on the one hand, increased expenditure to replace exhausted capital will counteract the useful effect of further capital intensification, while on the other, the economic realization of this capital requires the farm family to intensify its labour more than is permitted by the equilibrium of on-farm factors (Chayanov, 1925, pp. 222-3).

From this thesis a distinct theory of social differentiation and mobility has been derived. Chayanov traced the natural history of the family (from the time of marriage of the young couple through the growth of the children to working age etc.) and stressed demographic differentiation in contrast to the Marxist concept of class differentiation of the peasantry.

Only by taking the family through the full extent of its development starting at birth and finishing at death, can we understand the basic laws of its composition. If we take it that a surviving child is born every third year in a young family . . . we should try to explain how the relationship of the family labour force to its consumer demands changes as the family develops. (See tables.)

Table 1 Family Members' Ages in Different Years

<i>Year of family's existence</i>	<i>Age of children</i>										<i>Number of persons</i>	
	<i>Husband</i>	<i>Wife</i>	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>6th</i>	<i>7th</i>	<i>8th</i>		<i>9th</i>
1	25	20										2
2	26	21	1									3
3	27	22	2									3
4	28	23	3									3
5	29	24	4	1								4
6	30	25	5	2								4
7	31	26	6	3								4
8	32	27	7	4	1							5
9	33	28	8	5	2							5
10	34	29	9	6	3							5
11	35	30	10	7	4	1						6
12	36	31	11	8	5	2						6
13	37	32	12	9	6	3						6
14	38	33	13	10	7	4	1					7
15	39	34	14	11	8	5	2					7
16	40	35	15	12	9	6	3					7
17	41	36	16	13	10	7	4	1				8
18	42	37	17	14	11	8	5	2				8
19	43	38	18	15	12	9	6	3				8
20	44	39	19	16	13	10	7	4	1			9
21	45	40	20	17	14	11	8	5	2			9
22	46	41	21	18	15	12	9	6	3			9
23	47	42	22	19	16	13	10	7	4	1		10
24	48	43	23	20	17	14	11	8	5	2		10
25	49	44	24	21	18	15	12	9	6	3		10
26	50	45	25	22	19	16	13	10	7	4	1	11

Source: Chayanov, 1925, p. 57.

Table 2 Family Members Expressed in Accounting Consumer-Worker Units

Years of family's existence	Married couple	Children									Total in family		Consumers/Workers
											Consumers	Workers	
		1	2	3	4	5	6	7	8	9			
1	1.8										1.8	1.8	1.00
2	1.8	0.1									1.9	1.8	1.06
3	1.8	0.3									2.1	1.8	1.17
4	1.8	0.3									2.1	1.8	1.17
5	1.8	0.3	0.1								2.2	1.8	1.22
6	1.8	0.3	0.3								2.4	1.8	1.33
7	1.8	0.3	0.3								2.4	1.8	1.33
8	1.8	0.3	0.3	0.1							2.5	1.8	1.39
9	1.8	0.5	0.3	0.3							2.9	1.8	1.61
10	1.8	0.5	0.3	0.3							2.9	1.8	1.61
11	1.8	0.5	0.3	0.3	0.1						3.0	1.8	1.66
12	1.8	0.5	0.5	0.3	0.3						3.4	1.8	1.88
13	1.8	0.5	0.5	0.3	0.3						3.4	1.8	1.88
14	1.8	0.5	0.5	0.3	0.3	0.1					3.5	1.8	1.94
15	1.8	0.7	0.5	0.5	0.3	0.3					4.1	2.5	1.64
16	1.8	0.7	0.5	0.5	0.3	0.3					4.1	2.5	1.64
17	1.8	0.7	0.5	0.5	0.3	0.3	0.1				4.2	2.5	1.68
18	1.8	0.7	0.7	0.5	0.3	0.3	0.3				4.8	3.2	1.50
19	1.8	0.7	0.7	0.5	0.3	0.3	0.3				4.8	3.2	1.50
20	1.8	0.9	0.7	0.5	0.3	0.3	0.3	0.1			5.1	3.4	1.50
21	1.8	0.9	0.7	0.5	0.5	0.3	0.3	0.3			5.7	4.1	1.39
22	1.8	0.9	0.7	0.7	0.5	0.3	0.3	0.3			5.7	4.1	1.39
23	1.8	0.9	0.9	0.7	0.5	0.3	0.3	0.1			6.0	4.3	1.39
24	1.8	0.9	0.9	0.7	0.5	0.5	0.3	0.3			6.6	5.0	1.32
25	1.8	0.9	0.9	0.7	0.5	0.5	0.3	0.3			6.6	5.0	1.32
26	1.8	0.9	0.9	0.9	0.7	0.5	0.3	0.3	0.1		6.9	5.2	1.32

Source: Chayanov, 1925, p. 58.

We note a rapid increase in the proportion of consumers to workers. In the fourteenth year of the family's existence, this proportion reaches its highest point, 1.94. But in the fifteenth year the first child comes to the aid of the parents when he has reached semi-working age and the consumer-worker ratio immediately falls to 1.64. . . . In the twenty-sixth year of the family's existence, the ratio falls to 1.32. . . . Since the working family's basic stimulus to economic activity is the necessity to satisfy the demands of its consumers and its work hands are the chief means for this we ought first of all to expect the family's volume of economic activity quantitatively to correspond more or less to these basic elements in family composition (Chayanov, 1925, p. 60).

Taking the sown area as a measure of peasant wealth and the volume of economic activity, Chayanov shows a clearly expressed dependence between development of a peasant family and the size of area sown by it. He supports his proof with regional statistics of the evolution of peasant holdings and families from 1882 to 1911.

When we study the dynamics of these farms with the view that family size is entirely determined by its economic situation we might expect that farms sowing small areas will in the course of fifteen years continue to sow the same small areas and that farms well endowed will as before sow large areas and retain a large family. The works of Chernenkov, Khryashcheva, Vikhlyaev, Kushchenko and others, however, tell us something completely different as may be seen from the table below comparing the 1882 and 1911 censuses for Surazh uezd, Chernigov guberniya:

Table 3 Area sown in 1911 by 1882 area groups (%)

<i>Desyatinas sown in 1882</i>	<i>Desyatinas sown in 1911</i>					<i>Total</i>
	0-3	3-6	6-9	9-12	12	
0-3	28.2	47.0	20.0	2.4	2.4	100
3-6	21.8	47.5	24.4	8.2	2.4	100
6-9	16.2	37.0	26.8	11.3	2.4	100
9-12	9.6	35.8	26.1	12.4	16.1	100
12	3.5	30.5	28.5	15.6	21.9	100

Source: Chayanov, 1925, p. 67.

We see that a considerable part of the farms that sowed small areas gradually acquired a labour force as family age and size increased and

by expanding their sown area passed into the higher groups thus also expanding the volume of their activity. Conversely, former large farms passed into lower groups corresponding to small families created after division. This shows us that demographic process of growth and family distribution by size also determine to a considerable extent the distribution of farms by size of sown area and livestock numbers (Chayanov, 1925, p. 67). In saying this of course we are not removing from our usage the concept of social differentiation; but this form of differentiation is not to be seen simply by grouping by sown areas; it has to be studied by... direct analysis of capitalist factors in the organization of production, i.e. hired labour on farms, not brought in to help their own, but as the basis on which to obtain unearned income and oppressive rents and usurer's credit (Chayanov, 1925, p. 68).

Whereas the majority of Marxist economists believed in the advantages of concentration because such is the tendency of the capitalist mode of production, Chayanov maintained that horizontal concentration of production offered only limited advantages in agriculture. In an area of extensive cultivation where 2000-8000 hectares of grain land can be farmed with appropriate machinery, the optimal dimensions of productive units will not be the same as they are in a region of sugar beet cultivation where the more intensive use of machines makes transport costs grow disproportionately beyond an optimum of 200-250 hectares. In other words, natural conditions themselves impose certain limits on the possibilities of a horizontal concentration. These difficulties disappear however for vertical integration: small farms can benefit from all the advantages of scale by using the formula of co-operatives. That is why the competitive power of peasant farms versus capitalist farms or collective farms was much greater.

The whole point of this vertical integration was to reconcile the maintenance of peasant farms in the biological processes of intensive cultivation and livestock breeding where they were more productive than capitalist units with the requirement of technical progress, where the large enterprise had an advantage in mechanization and marketing. Chayanov had doubts about collective agriculture because the incentive problem had been solved more flexibly by co-operatives based on small family farms with their individuality intact than by the artels. Socialist society according to him had not yet found the stimuli that would impel the produc-

tion units to attain their optimal organization and the economy was destined to be the victim of a gigantic bureaucracy.

The dynamic processes of agricultural proletarianization and concentration of production, leading to large-scale agricultural production units based on hired labour are developing through the world and in the USSR in particular, at the rate much slower than was expected at the end of the nineteenth century[. . .]

The sole form of horizontal concentration that at the present time may, and actually does, take place is the concentration of peasant lands into large-scale production units . . . but it is not and cannot be of such massive size that we would be able to construct on it our whole policy of agricultural concentration. Therefore, the main form for the concentration of peasant farms can be only vertical concentration and, moreover, in its co-operative forms, since only in these forms will it be organically linked with agricultural production and be able to spread to its proper extent and depth' (Chayanov, 1925, pp. 257, 267).

Many of Chayanov's views were questioned by a variety of scholars. For example, he sometimes confuses the optimal dimension of an enterprise with the optimal dimension of cultivated areas or considers the peasant economy as a static entity independent of possible capitalistic environments etc. He has also often showed more indulgence to the traditional peasant economy than to the future of industrial agriculture, yet one can hardly accuse him of singly turning his back on progress. In the chapter that Chayanov wrote in 1928 for the collection of essays on *Life and Technology in the Future*, he foresaw the prospects offered in a more or less distant future by soil-less agriculture, by factories for food products and synthetic textiles. He also predicted that man would be able to control the climate and forecast harvests.

Chayanov's theory was devised to take account of Russian conditions and, as Daniel Thorner has shown, works better for thinly populated countries than for densely populated ones where peasants could not readily buy or take in more land. Nevertheless the problem raised over forty years ago by the leader of the Russian organizational school, and the basic approach focusing analysis of peasant economies on the dynamics and structures of family farms, are just as pertinent today for developing countries where peasant economies still predominate.

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