

Poverty and Persistence of the Peasantry

Background paper for the International Workshop on this Issue.

Organised by CROP and El Colegio de México

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1. Introduction. Agricultural capitalism needs peasants. Contents of the paper.

In its various studies on rural poverty worldwide, the International Fund for Agricultural Development (IFAD) states that approximately one billion inhabitants of rural settings are poor; although these figures obviously underestimate poverty, as shown by Thomas Pogge's analysis of World Bank figures and those used in the First UN Millennium Development Goal (similar to those of IFAD)¹.

We know that most of the world's rural inhabitants are poor. We have to explain why *the vast majority of the inhabitants of rural settings (who live in households headed by peasants or rural day labourers) are poor*. Conventional answers revolve around the severe limitations of peasants' resources, which translates into low production levels and therefore low income; and/or else the fact that they are subject to various forms of exploitation (surplus extraction)². However, this conventional explanation would find it hard to explain why, "1.7 of the 2.6 million farms existing in the USA *had inadequate incomes for an acceptable living standard*, while their survival obviously depended on their access to

¹ *Politics as Usual*, Polity Press, Cambridge UK, 2010; see especially chapters 3 and 4.

² The exploitation of peasant's has been emphasized by many, among them by Henry Bernstein who has coined the expression the "simple reproduction squeeze". See, for instance, his "Notes on Capital and Peasantry" in John Harriss, *Rural Development. Theories of Peasant Economy and Agrarian Change*, Routledge, London, 1982/1992 (pp. 160-177)

income from other sources.³ Moreover, these peasants and poor farmers have defied the predictions of their disappearance off the face of the earth by writers from both the left and right:

"The classical conception of the development of capitalism in agriculture is that, as in industry, the agrarian class-structure will tend to polarize; the petty commodity producer will tend to disappear: *a capitalist relation of production will develop*, involving an agrarian bourgeoisie and a rural proletariat. According to this classical notion, the agrarian future would be one of big estates, managed by capitalist farmers, run with machinery and other capital-intensive methods of production, and employing landless labourers". Close to a hundred years later, history has apparently falsified this notion: In Europe, the big estates have decreased in importance. *The typical unit today is the family farm*. The rural proletariat has decreased, not only in absolute size, but as part of the rural labour force. In the six original countries of the EEC in 1966-7, for example, only 14 percent of the labour force was 'non-family', i.e. mainly hired. In the United States the percentage of hired labour to total farm employment has fluctuated around 25 percent since 1910 with no discernible trend to increase.... the modern rural proletariat is largely part-time: students housewives, etc. drawn into agriculture during certain peak-periods, as for example during the harvest of vegetables and fruits. The group of full-time agricultural labourers is surprisingly small; in the US, for example, it was estimated to have been 670.000 persons in 1972."⁴

These are two of the issues I propose to deal with in this paper on poverty and the survival of family units, peasants in the third world and peasants or farmers in the first world, two phenomena that raise fundamental conceptual and practical challenges. To this end, I will review the appropriate international bibliography. My theoretical position can be stated as follows:

Peasant poverty is determined by the seasonality of agriculture expressed in unequal labour demands throughout the year and concentrated in sowing and harvest periods (see Graph 1)⁵ and the fact that in capitalism, prices only incorporate (as costs) the wages of days that have effectively been worked and paid for. Since peasant producers compete in the same markets as capitalist firms, and act as price takers in them, the prices of their products can only reward for days that have been effectively worked. In other words, *the social cost of seasonality is absorbed by peasants who thence have to live in permanent poverty*, which makes them errant proletarians in search of additional income.

If the prediction about the transformation and concentration of agricultural family units into capitalist units had been fulfilled, we would not have to explain either peasant poverty or survival: peasants would have ceased to exist. During the debate with Armando Bartra recounted in section 7 below, I discovered that the theory I had formulated to explain peasant poverty also accounted for the survival of peasantry, which led me to the radical thesis that "capitalism cannot exist in a pure form in agriculture: *without the peasants' supply of [cheap] seasonal labour, capitalist agriculture would be impossible. There would be (virtually) no-one prepared to work only during the sowing/harvest periods*". The permanence of peasant agriculture therefore makes agro-capitalism possible." In other words, *peasant agriculture is not only functional but indispensable to the existence of capitalist agricultural firms*. But a peasant will only be obliged to sell his labour seasonally (and be prepared to sell it cheaply) *if he is poor*: rich farmers in the USA can (and do) spend the periods when there is no farm work drinking beer. In other words, *agricultural*

³ Susan Archer Mann, *Agrarian Capitalism in Theory and Practice*, University of North Carolina Press, Chapel Hill, 1990. p. 142.

⁴ Göran Djurfeldt, "Classical Discussions of Capital and Peasantry: A Critique", in John Harriss (Ed.), *Rural Development. Theories of Peasant Economy and Agrarian Change*, Routledge, London, 1992, p. 139.

⁵ All graphs are inserted at the end of the text.

capitalism can only exist in symbiosis with poor peasants, prepared to (and urged to) sell their labour some days a year. A theory that explains peasant survival must also explain their poverty. My thesis is, however, asymmetrical: although capitalists could not live without peasants, the latter would be much better off without capitalists. This is because, as I mentioned earlier, when capitalist firms are present in the market, farm product prices only reflect the costs of labour effectively paid for. For capital, labour is a *variable cost*: it only pays for the days it hires the labour force. Conversely, for peasant family economy, it is a *fixed cost*: it always has to provide for the reproduction of the whole family, including members who never work throughout the whole year. In an agricultural market in which all suppliers of goods were family units (or cooperatives with a moral responsibility for the lives of their members and their relatives), agricultural prices would reflect the year-round cost of the reproduction of labour and would therefore be much higher than current ones. The most widespread cause of peasant poverty in the world would have disappeared.

2. The Nature of Agricultural Production. Its Contrast with Industrial Production

The training of economists, including those with masters and doctoral degrees, is such that the majority is incapable of properly answering the question about the essential economic differences between agriculture and industry.⁶ At the risk of stating the obvious, one must begin by pointing out that agriculture works with living material; that agricultural production consists basically in *taking care of and stimulating the natural biological process of plant growth*. By contrast, in industry the objects in the work process are inert materials. Plants have a biological cycle -a period of growth- and grow in the earth. Therefore, work processes in agriculture must be carried out according to the plant's stage of growth —or the seasonal process of development of plants — and must be carried out in the place where the plant is located. In other words, the biological process imposes both temporal and spatial rules on man's activities. Conversely, in industry, where one works with fibres, metals, wood, plastics or harvested grains, the work process is not constrained either spatially or temporally. The speed of the process and the place where it is carried out are dictated by man.

These differences can be summarised by saying that whereas in industry, *processes* can be *continuous* (24 hours a day, 365 days a year), in agriculture, they are *seasonal* (e.g. harvest concentrated in a few weeks of the year). A second difference is that whereas in industry all the activities that constitute a production process may be *simultaneous* (one unit of clothing may be being cut out while another is being sewn and a third packed), in agriculture, they are necessarily *sequential*. A third difference is that whereas in industry *the material may be transferred to the operator or the machine*, in agriculture *the operator or the machine must move to the place where the plant*⁷ *is located*.

A fourth difference derives from the *uncertainty factors* associated with the biological nature of agricultural production, which do not exist in industrial (or service) activities. The

⁶ The reason for this is undoubtedly the prevalence of a paradigm in which agriculture plays an absolutely secondary role and where economists are therefore not trained in agricultural economics. Agricultural economists are obviously an exception to what has been said about economists.

⁷ It is very significant that both in English and Spanish a living vegetable and a factory are called by the same name: *plant*, term which denotes a given location in both cases. Thus “plantarse” in Spanish is a verb that means assuming a non moveable position.

variability of rainfall in zones without irrigation systems, the presence of pests, etc., determine the risk of partial or total crop loss. The risks of industrial production loss are lower and, except for disasters such as fires, explosions and earthquakes are not associated with natural phenomena beyond the producer's control. This difference can be summarised by saying that whereas in agriculture *productive uncertainty* prevails, in industry, *productive certainty* predominates.

A fifth difference derives from the *perishable nature* of agricultural products, which contrasts with the *non-perishable nature* of industrial products. Although cereals are much less perishable than fruit and vegetables, they cannot be stored permanently, as, in principle, most industrial products can.

Some of the consequences of these differences are obvious, others less so.

3. The Specific Character of the Peasantry⁸

Without engaging in a discussion about whether the peasant economy constitutes a specific mode of production, I consider that the concept is applicable to smallholders that work individual plots of land as their principal source of income, based mainly on family work, but also includes communities where certain activities are collectively carried out or, at least are carried out with collectively owned resources. Here I follow A. V. Chayanov, for whom "peasant family farm work" or the "family farm" is characterised by not using salaried work and is supported solely by the family labour force.⁹

It is unclear whether the concept of the peasantry should or should not include those smallholders whose main income comes from the sale of labour and for whom the plot of land they work constitutes a complementary income. A propos of this, Roger Bartra, speaking about Mexico, notes: "...in 1960, 1,240,000 peasants were classified as possessing below subsistence plots of land. These peasants, who account for 50% of the total, must complement their income with wage labour (it might be more accurate to say that they are proletarians who complement their income with agriculture)."¹⁰

Some features of *peasant family units* are:

- 1) The peasant unit is an organic structure, a system of a nature such that changes in one of its elements affect the rest. The activities within each unit are interdependent, because they compete for the same resources; because sometimes the by-products of one activity serve as inputs for another and lastly, because of the competitiveness or biological complementarity between activities.
- 2) Unlike a capitalist firm, which is exclusively a production unit, the peasant family is simultaneously a production and a consumption unit. In this complex structure, the

⁸ This section has a very limited scope. First, it is limited to the economic perspective and second, it does not attempt at reviewing the vast existing literature. A very systematic review of the literature was performed by Theodor Shanin in the two articles called "The Nature and logic of the peasant economy", which ianaugurated the *Journal of Peasant Studies* (volume 1, numbers 1 and 2, 1973). See especially the first article subtitled "A generalisation".

⁹ Chayanov devotes his most important work to constructing a theory of the functioning of these units: "Peasant Farm Organization", published together with "On the Theory of Non-capitalist Economic Systems," in A.V. Chayanov, *The Theory of Peasant Economy*, edited by Daniel Thorner, Basile Kerblay and R.E.F. Smith, R.D. Irwin, Inc., Homewood, Illinois, 1966.

¹⁰ *Estructura agraria y clases sociales en México*, Ediciones Era, Mexico, 1974, p. 30.

dominant pole determining the objectives of the unit is the set of family needs, the family as a consumer unit. For most of the world's peasants, given their poverty and the lack of security to which they are subject, the main objective is survival. The decisions about what to grow and with what degree of intensity to do so are influenced not only by their resource endowment and relative prices, as would be the case in a capitalist unit, but also by the number and composition by sexes and ages of family members. Rights and responsibilities lack a formal assignment; decisions are not the necessary or exclusive faculty of a specific person.¹¹

3) Family security plays an essential role in any decision. The consequences of crop failure for a poor family go beyond financial difficulties. In particular, the larger the cash transactions, the greater the risks, meaning that for the same level of income and work, peasants would prefer a situation that involves a lower volume of monetary transactions.

4) Peasant units are systems subject to various restrictions simultaneously: on land, on "capital", as well as on labour during certain weeks of the year. Since the resource endowment varies from unit to unit, the valuation of resources (or their shadow price as many economists would say) also differs. Likewise, this valuation will vary within each unit according to the mixture of crops sown.

5) Many cultivation practices, such as mixed crops and sowing distributed over time are different from those of western agriculture and little known in farming sciences.¹²

6) The family goal (maximising well-being) is achieved through a flexible process that permits reviews and requires frequent decisions.

Even though there is no single theory on peasant behaviour, it is generally accepted that peasants' behaviour cannot be explained using the capitalist rules of profit maximisation. According to some authors, the categories of "profit" and "wage" cannot be applied to family units. Foremost among these authors is Alexander V. Chayanov, who, in "On Non-Capitalist Modes of Production," attempted to define the economic categories applicable to a broad range of modes of production.¹³ Shanin considers Marx's position similar to Chayanov's when he expresses as Marx's basic image "of an individual household containing the whole economy", quoting his work on Pre-capitalist Economic Formation. A different opinion has been expressed by Roger Bartra, who states:

"One of the most important conclusions that can be drawn from the analysis of land rent in Mexico is that the small, non-capitalist peasant economy is perfectly integrated into the capitalist system. Its peculiarities cannot be understood without the use of conceptual instruments created for the study of

¹¹ Referring to the administration of peasant agricultural units in East Africa, Belshaw and Hall point out: "The wife, who controls most of the supply of family work...is directly interested in growing food...The promotion of the production of commercial crops, the money from the sale of which goes into her husband's pocket, gives her a more uncertain perspective of obtaining positive yields from her investment in work" (D.G.R. Belshaw and Malcolm Hall "The Analysis and use of agricultural experimental data in Tropical Africa," p. 25 n, a manuscript that must have been published in 1973 in the *East African Journal of Rural Development*. A preliminary version was published in German in *Zeitschrift für Ausländische Landwirtschaft*, # 4, 1965. They thereby show that it is a mistake to assume that economic contradictions are absent in the heart of the peasant unit.

¹² Very little research has been undertaken to evaluate the common agricultural practice of mixed crops. See D.G.R. Belshaw and Malcolm Hall, *op. cit.*, p. 20. However, the research that has been conducted favors the practice.

¹³ See *The Theory of Peasant Economy*, *op. cit.*, p. 25.

any capitalist economy (wage, profit and land rent), although they must be adapted to specific conditions.¹⁴

In any case, both Chayanov's theory and the discussions of those that have studied peasant behaviour in depth can be summarised by saying that the optimum sought by peasants is an optimum of well-being, or as Chayanov would say, a work-consumption equilibrium. Roger Bartra's statement cited earlier should not be interpreted in the sense that peasants seek to obtain maximum profits, since the context of the statement is of society as a whole, rather than of the agricultural unit.¹⁵

4. Seasonality and rural poverty

Agricultural seasonality is expressed in unequal *labour requirements* throughout the year. In industry (with the exception of those branches that rely on a highly perishable and therefore seasonal, agricultural or fishing, supply) labour requirements remain, in principle, constant throughout the year. This well-known fact leads to consequences that have barely been analysed. The most important one is linked to the question *Who pays for the cost of reproduction of the agricultural labour force -and that of its families- during periods of little or no agricultural activity?* This question can be reformulated as follows: *What labour costs are relevant to the setting of agricultural prices? Only the cost of days worked or the year-round cost of reproduction of the producer and his family?* This dilemma does not occur in industry: insofar as one works throughout the year, salaries are associated with maintaining the wage earner and his family year-round. *The presence of this dilemma in agriculture explains the enormous variety of forms of production present in it. Each form of production is a particular way of solving this dilemma.*

In a classic essay, John W. Brewster, regarded as the “philosopher of American agriculture,” opens his argument thus:

“It has been said that because of mechanization, ‘A family farm in agriculture makes as little sense as a family factory in industry’ Is this so? Evidently not. Family units of production are unthinkable in car and steel manufacture, but *both* family and larger-than-family units are as common in agriculture after mechanization as before. Why?”¹⁶

After arguing that “neither hand nor machine techniques determine either family or larger-than-family farms”, he asks what explains the “dominance of the one or the other in various regions, both now and in the pre-machine era of American agriculture?” His reply is as follows:

“The answer seems to lie (1) in the degree to which a given farming area is more suitable for (approximately) single or multiple product farming plus (2) *customs which free a larger-than-family operator from labour upkeep during periods of farm ‘unemployment’*.

He goes on to point out:

“... growing fewer and fewer products on a farm greatly lengthens unemployment periods between operations. Since most labour on family farms is family labour, this means that *family operators must pay (in the form of family living expenses) for their labour in both farm employment and unemployment periods. In other words, labour for the most part, is a fixed cost for the family*

¹⁴ Roger Bartra, *op. cit.* p. 40

¹⁵ For a more detailed discussion, see Roger Bartra's “La teoría del valor y la economía campesina: invitación a la lectura de Chayanov”, *Comercio Exterior*, Vol. 25, N° 5, May 1975.

¹⁶ John W. Brewster, “The machine process in agriculture and industry,” in Karl A. Fox and D. Gale Johnson (eds.), *Readings in the Economics of Agriculture*, George Allen & Unwin Ltd., London, 1970, pp.3-13. (p. 3).

operator but not for the larger operator as he pays labour only for the time it is actually employed on his farm. Were some custom available that would free the family as well as the larger operator from labour upkeep during the long unemployment periods between farm operations, it is highly questionable if the larger operator's managerial advantage would enable him to crowd out the family operator in even single product farming areas". (*op. cit.* pp. 5-6; emphases added).

The large agricultural units of the Latin American past, like Mexican haciendas, solved the problem of maintaining the labour force during periods of unemployment intelligently –for their interests– by giving the peasant the right to work a plot of land for his family consumption so that he could subsist while at the same time being available to work for the boss. This is, essentially, the same solution as that of feudal systems and sharecropping: giving families the right to work the land, they transfer to them the seasonal problem of agriculture, freeing the feudal lord or boss from this commitment. This means that the biological risks of agriculture are also transferred to the peasant, whether totally or partially, according to the latter's forms of taxation or payment.

In capitalist agriculture, as Brewster points out (although he does not use the term capitalist), the problem of maintaining the wage-earner during periods of unemployment is his own matter rather than the capitalist's. *Price-setting in capitalist agriculture is therefore only determined by the labour costs during of days that have been effectively worked and paid for. Insofar as the family producer, be he a farmer or a peasant, takes part in the same markets as capitalist producers and acts in them as a price taker, it is also obvious that the price of his products can only pay for the days that have been effectively worked. However, the family continues to assume responsibility for the year-round maintenance of its members.*

Conventional neo-classical theory holds that the aggregate supply function (or curve) of any good (for example, maize) is the sum of the supply functions of all its producers. The short term supply curve of each producer is his marginal costs curve, which leads to a typical upward curve due to the presence of diminishing returns (increasing marginal costs) when there are one or more fixed factors present. Conversely, the long term supply curves of each firm and the market aggregate curve are determined, in perfect competition, if the same technology and soil fertility exist in all firms, by the lowest points of average costs, since the entry of additional firms into a specific market will reduce extraordinary benefits to zero¹⁷. Given that the predominance of capitalism is not only economic but cultural, I would like to argue that, in a capitalist economy, with a significant presence of capitalist firms in agriculture, peasant producers themselves will only include effectively worked days in their labour costs, rather than their year-round cost of reproduction. One way in which this cultural imposition occurs, for example, is through bank credit. By giving peasants credit, banks (whether public or private) will calculate crop costs in the same way as they do with capitalist units. This acceptance of the cultural imposition of the capitalist production mode explains why peasants are willing to produce and sell if they recover the costs of inputs and effectively worked time. *They internalise, so to speak, one of the factors of their own poverty.*

¹⁷ See any textbook on microeconomics, such as Walter Nicholson, *Microeconomía intermedia y sus aplicaciones*, Mc Graw Hill, 2001, Bogotá, chapter 8. Naturally if there are differences in soil fertility, this produces differential land rents (called Ricardian, in honour of David Ricardo, who was the first economist to identify them). See Nicholson, *op. cit.* Chapter 9.

On the basis of the dominant paradigm, Tyrians and Trojans have forecast the generalization of the capitalist economy in agriculture (the decomposition of the peasant economy). Who would take care of the labour force –and its families- during the periods of agricultural unemployment if this prediction came true? Can a generalised system of temporary wage labour be feasible? Luis Cabrera, the illustrious early 20th century Mexican thinker, said, on the subject of providing communities with *ejidos*, that this would enable medium and large estates to have access to cheap, widely available labour. In other words, Cabrera regarded capitalist agricultural firms and the peasant economy as complementary. While the latter guaranteed the subsistence of the labour force by complementing the income obtained from crops sown with wage labour in capitalist firms, these last had a supply of cheap labour without having to worry about maintaining it during the period when its services were not required.

Unlike these forms of production that transferred the problem of seasonality to peasants or wage earners, *the slave economy* in agriculture had to defray the cost of maintaining its slaves year-round –as it has to be done, in any productive form, with horses and other working animals– which must undoubtedly have reduced their competitive capacity *vis-à-vis* the capitalist economy which, as we have seen, only pays for days that have been worked. Whereas the slave economy obtained adult slaves cheaply, this disadvantage was offset by the elimination of intergenerational reproduction costs of slaves. But as A.V. Chayanov pointed out:

"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 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 slaves, 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.¹⁸".

Apparently, the only productive forms that assume the costs of reproducing the agricultural labour force year round are primitive and slave societies and the peasant economy (including the family farmer). *If the peasant economy did not take part in the same markets as capitalist enterprises, competing with them, it could, in principle, transfer the costs of year-round family maintenance to the consumer, via prices. But insofar as this is not the case, it must assume the "social cost" that capitalist forms impose on agriculture*, with peasants having to seek employment as wage workers off the plot of land or undertake other activities (whether agricultural or non-agricultural) to complement their income. *The human cost of this is extremely high (separation from the family, often sub-human living conditions, etc.) while the economic result is permanent poverty.* Despite this, the peasant economy shows an enormous capacity for competition and resistance. The forecasted generalisation of the capitalist economy in the countryside does not occur partly because the capitalist firm needs the peasant economy, which supplies it with cheap labour and partly because of the competitive advantage of the independent peasant, who appropriates all the added value and does not have to divide it between wages and profits as in the capitalist economy.

¹⁸ A.V. Chayanov, "On the theory of non-capitalist economic systems," in A.V. Chayanov, *The Theory of Peasant Economy*, op. cit., pp. 15-16. There is a Spanish translation, included in *Chayanov, La Teoría de la Economía Campesina*, op. cit..

Whether a family agricultural unit can live adequately off the working days invested in its plot of land and therefore may or may not need to seek additional sources of income obviously depends on factors that explain the productivity of agricultural work as well as the relative prices it faces. The objective situation of the “American family farm” is evidently very different from that of the Latin American or African or Asian peasant.

Let us take a look at the American family farm, and use this to analyse the consequences of the second and third differences between agriculture and industry (sequentiality vs. simultaneity, moveable material vs. non-moveable material). John Brewster summarises the different consequences of mechanization in agriculture and industry as follows:

"In pre-machine times, farming and manufacture were alike in that operations in both cases were normally done sequentially, one after another; usually by the same individual or family. The rise of the machine process has forced agriculture and industry to become progressively different... For in substituting machine for hand power and manipulations in agriculture individuals in no way disturb their pre-machine habit of doing their production steps one after another whereas in making the same substitution in industry men thereby force themselves to acquire increasingly the new habit of performing simultaneously the many operations in a production process¹⁹... the substitution of machine power and manipulations in industry calls for a corresponding revolution in the pre-machine social structure whereas the contrary is true in agriculture.... For in transforming the older sequence of operations into the modern simultaneous pattern, industrial mechanization quickly multiplies the number of concurrent operations in a production unit far beyond the number of workers in a household. Hence, in adopting machine techniques, men thereby force themselves to replace the older society family production units with enormously larger units, disciplined and guided by a hierarchy of bosses and managers. In agriculture, however, machine methods remain as compatible as hand techniques with either (1) family or (2) larger-than-family units. Their compatibility with family units lies in the fact that farm operations are as widely separated by time intervals after mechanization as before; hence, the number of things that must be done at the same time on a farm remains as close as ever to the number of workers in an ordinary family.". (*Ibid.* pp. 3-5)

But John Brewster not only shows how the mechanised farm is as compatible with the family economic unit as the non-mechanised one but also analyses comparatively four associated consequences in agriculture and industry: the functional and task forms of the technical division of labour; the worker's identification with the process and the product; the nature of the work performed; and the creativity involved in it:

"First, such advance accelerates the functional and task forms of specialization in industry but not in agriculture. In working simultaneously, manufacturing machines so multiply the number of

¹⁹ Brewster introduces here (p.4) a large footnote in which he explains that “this fundamental difference between machine industry and agriculture stems from the contrasting nature of materials handled in each case”. And he explains that “Farming deals with living things, fixed in the soil; whereas industry deals with lifeless and mobile materials”. He gets inside industry to show how it works: “Since land is not involved in industrial operations, transport and processing functions are usually separated, the job of transport being to carry materials to their (processing) operations. Hence industrial mechanization results in operationally interdependent machines (moment by moment) inasmuch as no transport or processing machine is normally able to operate except through receiving materials from simultaneously operating machines”. And he then compares this with mechanised agriculture: “In contrast, transport and processing functions are inseparable aspects in any operation involving land, the job of transport being to carry operations to their materials. Hence farm mechanization results in independent (moment by moment) machines inasmuch as each machine (doing an operation involving land) must embody both these functions and is therefore able to provide itself with its own materials”. He concludes: “Though such machines are structurally capable of operating simultaneously, they are prevented from doing so by the fact that the seasonality of climate, biological cycles of living things, and the ‘spreadoutness’ of the soil prevent (1) expansion of the scale of production and (2) the concentration of operations anywhere near the point required for their simultaneous performance”

concurrent operations as to (1) wipe out the union of the managerial, supervisory, and labour employments in the same individual (or family) and re-establish them as full-time occupations of different classes, and further (2) destroy a similar union of labor operations...the absence of the functional and task forms of specialization in industry would cause the worker to waste time in *going* from one operation to another, while any marked degree of task specialization in agriculture would cause the workers to waste time in *waiting* from one operation to another. To keep 'modern' in respect to efficiency, farming must remain 'old-fashioned' in respect to the 'higher forms' of specialization. Second... the relationship that once prevailed in both was personal identification of the worker with the product, as the sequential pattern of operations in each case enabled him to guide materials through one operation after another until the final product was the embodiment of his planning and effort. This relationship still holds in machine agriculture because the older sequence of operations still remains. But in working simultaneously, industrial machines have long since loosened the worker from the product and tied him to the repetitive performance of a particular operation, as he cannot be in different places at the same time. Third, the machine has created entirely different types of causal connections in agriculture and industry, the upshot of which is to leave farmers undisturbed in their old standing as purposive (self-directing) beings in their working activity while strongly tending to reduce industrial workers to the status of machines. Fourth, not only does machine agriculture conserve men as self-directing workers... but it also conserves and expands the traditional human satisfactions in work whereas the contrary is true in industry. The old handicraft form of production met rather well the individual's need for finding evidences of personal significance through (1) writing large his creative powers into the products of his hands and (2) being the master of the rate and quality of his labour motions. ...machine farming remains even more in line with traditional work-satisfaction than hand techniques. For in leaving unaltered the product of farming as the expression of the farmers planning and effort, machine agriculture machine agriculture likewise leaves the farmer in possession of the old artisan's creative satisfactions that arose from guiding materials through their main operations into finished products. Also it leaves the farmer in full possession of the artisan's power to control his labour motions by his idea of the output desired from later operations because it does not tear apart his management and labour activities. Finally, machine agriculture expands these satisfactions of self-directing and creative workmanship through releasing human energies from the brute strain of operations into the larger life of will and imagination on which farming so intimately depends. ".(Ibid. pp.7-9)

The differences regarding the nature of the material (moveable or non-moveable) mean that, in agriculture, machines must be moved to the ground and plants, in contrast with industry, where the object of work has to be moved to the machines, which are immobile. This difference places limits on the optimal economic size of agricultural units: the larger the units, the higher the costs of moving the machinery to where it is needed. This limit means, among other things, different market structures between agriculture and industry. As Brewster points out: "The simultaneous pattern of operation makes possible such an expanded scale of production that the efficient utilization of industry may require only one, or at most a very few firms, each so large as to substantially influence the price at which it buys and sells.... Shift to machine methods has neither added to nor detracted from the primitive competitive character of American agriculture (Ibid. pp.10-11)

The highly perishable nature of certain agricultural products is reflected in seasonal price variations in contrast with industry which, in principle, maintains constant prices year round. However, when studying agricultural price setting, it is necessary to take other characteristics of agricultural production simultaneously into account. Insofar as processes are not continuous, neither is the production flow. In general, the year's production can be concentrated in a few weeks. Unlike the industrial producer, the farmer cannot regulate his production flow on a daily basis. Whereas the latter can, almost daily, adjust his production to the signs of the market, once the farmer makes the decision to sow, which in principle

determines -several months later- his volume of production, he has to base this on what the market situation will be when the time comes to harvest and sell.

At the risk of simplification, one could say that apart from the uncertainty (associated with natural risks) that characterises agricultural production and contrasts it with industry, there is another important difference: business risk in industry is concentrated mainly in investment in fixed capital, whereas in agriculture, risk is concentrated in investment in circulating capital (seeds, input, labour), which must be made in every agricultural cycle.

These differences have forced the development of specific theories of price setting for agriculture. One of the best-known is the cobweb theorem which, in essence, holds that the current price of an agricultural product is determined by the amount produced during the previous cycle, while this amount is determined by the price of the previous cycle.²⁰

5. The debate on the persistence of peasantry

Frank Ellis said that the central debate in Marxist theoretical work “refers to the sustainability, or persistence, of peasant forms of production within the dominant mode of capitalist production” and identifies two opposite lines of reasoning regarding this persistence. On the one hand, the classic Marxist position put forward by *Lenin* (1967) is that:

“the pressures on peasants created by capitalist production relations must, inevitably, result in their disappearance as a distinct form of production... [because of] *social differentiation* peasant communities are predicted to disintegrate into the two social classes of capitalist farmers and rural wage labour. The reasons this may happen are manifold, but they include such factors as the institution of private property in land, the differential adoption of improved cultivation practices by different individual farmers, the enforced abandonment of their holdings by peasants unable to compete in the market with their more advanced neighbours, the foreclosure by creditors on farmers who have run into debt, and the increasing employment of wage labour by those farmers who are successful”.²¹

The opposite line of reasoning, says Ellis, is that family agricultural production, of which the peasantry is the main type, has an internal logic that enables it to withstand the pressure of capitalist production relations and reproduce itself indefinitely. Among the components of this line, he analyses: a) peasants’ capacity, given their control over the means of production, particularly land, to provide for their needs for simple reproduction; b) the social norms of peasant communities focusing on reciprocity rather than on the individual maximization of profits (the “moral economy” argument set forth by *James C. Scott*); c) demographic factors opposed to the land concentration due to its subdivision in inheritance; d) peasants’ capacity to overcome the pressure of the market, by increasing the amount of work invested in production (or peasants’ capacity for self-exploitation); e) natural or technical features specific to agriculture that make it unattractive to capital (such as the duration of the productive cycle, climate variability, the higher risk of production failure, supervision difficulties); f) the functional advantages for capitalism of leaving agriculture in peasants’ hands (for example, cheaper foods, less risk), linked to reasons d) and e). (p.

²⁰ For a detailed analysis of this theory, see Frederick V. Waugh, “Cobweb Models,” in Karl A. Fox and D. Gale Johnson (eds.) *Readings in the Economics of Agriculture*, *op. cit.*, pp. 89-106.

²¹ Frank Ellis, *Peasant Economics. Farm Households and Agrarian Development*, Cambridge University Press, 1996, pp. 51-52.

52).

The author points out that the model by the famous Russian populist *Alexander Chayanov* is one of the non-Marxist theories within this line of reasoning. We should note that Ellis points out that Chayanov explains the absence of unequal accumulation among peasants by the fact that accumulation does not come into their motivation, which is reduced to the satisfaction of family needs and therefore to simple reproduction. But Ellis also finds two reasons in Marxist thought for the persistence of the peasantry consistent with the logic of capitalism and the market. First of all, non-accumulation in the peasant economy may occur not as a result of the lack of motivation in this respect among peasants but because capitalist production relations continuously force peasants towards simple reproduction through the *capture* (through various mechanisms) of *any surplus created* and by the devaluation of peasant work derived from the innovations that reduce the price of agricultural goods. Both factors can be described, as *Henry Bernstein* said, as a “squeeze towards simple reproduction” that the market imposes on peasants. Secondly,

“...it has been argued that certain aspects of farm production are awkward for capitalist production relations and this discourages the advance of capitalism in agriculture. The principal factor is the length of the farm production cycle compared to the time in which labour is productively employed. This refers to the seasonal pattern of labour use, which in family production means that household labour is applied unevenly through the year. For capitalist production this poses the problem either of paying for permanent wage labour when it is not needed all the time or depending on the uncertainties and social disruption of migrant labour.”(Ellis, op. cit. pp. 53-54).

In this paragraph, Ellis cites an article by Susan Archer Mann and James A. Dickinson²² whose contents are known in the bibliography as the *Mann-Dickinson thesis*, which, because of its importance, I shall discuss in detail later on. In the book edited by John Harriss on rural development and the peasant economy, this article is referred by Harriss as follows: “*Mann and Dickinson have recently sought to explain this [the non-prevalence of major capitalist production units in agriculture] in terms of the Marxist theory of value*”.²³ In fact, as we shall see, the article by these authors is based primarily on books II and III of *Capital* and on *The Grundrisse*. In the meantime, let us examine *Vergopoulos'* conception of the family agricultural unit and its relations with capital:

“family farming is the most successful form of production for putting the maximum volume of surplus labour at the disposal of urban capitalism. It also constitutes the most efficient way of restraining the prices of agricultural products. The peasant that is working for himself does not necessarily consider himself to be a capitalist, or an entrepreneur, whose activities depend on the ability to obtain a positive rate of profit. On the contrary, although the head of his agricultural concern, he sees himself, more often than not, as a plain worker who is entitled to a remuneration which will simply assure him his livelihood. Moreover in the framework of domestic economy the problem of ground-rent does not arise... For capitalists contemporary family farming is not an economic space which has to be penetrated and conquered, but an “exotic” whole which has to be subdued as such.” (K. Vergopoulos, “Capitalism and peasant productivity”, *Journal of Peasant Studies*, Vol.5, N° 4, 1978, pp. 446-465 quoted in John Harriss, *Rural Development. Theories of Peasant Economy and Agrarian Change*, op. cit., pp. 119-120).

Harriss questions the general validity of family modes of production by noting that in Asia and Latin America, most family units are *marginal agricultural units*, which he defines as

²² “Obstacles to the Development of a Capitalist Agriculture”, *Journal of Peasant Studies*, Vol.5, N° 4, 1978, pp. 466-481.

²³ *Rural Development. Theories of Peasant Economy and Agrarian Change*, Routledge, London, 1992, p. 119.

units that are unsuitable for supporting the families that operate them. (The same happens in Mexico; see Graph 2 in which below infrasubsistence level peasants are equivalent to Harriss's marginalized ones and represent the vast majority of peasants). He adds that these marginal units can continue existing and provide the basis for the deep entrenchment of commercial and usury capital (*op. cit.* p. 120). The reader should note that in defining marginal units, without explaining why they are as they are, Harriss begs the question. Precisely because of this, I hold that the poverty and persistence of the peasantry must be explained together.

6. Djurfeldt engages in a debate with Kautsky

Djurfeldt says that the non-fulfilment of the classic Marxist prediction that agriculture would become totally capitalistic should not be regarded as a fatal blow to a non-mechanistic, non-deterministic version of historical materialism. We must assume the challenge, he says, of confronting the actual structural development of western agriculture with this prediction in order to find the underlying unjustified assumptions in it, replace them with others with more solid foundations and derive the consequences for a new approach of historical materialism to the agrarian issue. In the article I am now reviewing, Djurfeldt seeks to contribute to reviving the discussion on the subject.²⁴ It is unlikely however that Marx sustained this unfulfilled prediction (see quote at the end of this section).

The classic expectation about land concentration, he says, was based on the economies of scale supposedly present in large-scale agricultural units. This concentration would entail a revolution in productive forces that would expel peasants from production and turn them into wage workers. Despite peasants' capacity for resistance, the most they would be able to achieve would be to postpone the advance of capitalism but not prevent it. However, this peasant tenacity could not explain, says Djurfeldt, the fact that since the late 19th century, large farms have become less important while medium-sized farms increased their importance and small ones were fragmented. To these trends, Djurfeldt adds another very important one for this article:

“...there is a tendency for the big *latifundias* to divide parts of their land into parcels, where they settle their workers; in this way they get their own labour-colonies. This process has a counterpart in many countries, for example the British Small-holding Act of 1892²¹ ... *it is a way of decreasing the cost of labour in a capitalistic entreprise, which in more recent times also has been the specific aim of land reforms in many Latin American countries.* When they have their own land, labourers reproduce their labour-power on their land, and thus the capitalists need not pay them the full value of their labour-power²² (the value of labour-power is equal to its cost of reproduction)²³ ... Stated in the most general way, we may say that one agrarian class, the poor peasants, who by definition own too little land to reproduce themselves, and who are thereby forced to take employment – are tied in exactly this way to the rich peasants or *latifundias*.²⁴” (pp.141-142).

This superb paragraph shows that *pure capitalism is impossible in agriculture* and (although Djurfeldt does not say so explicitly) that the seasonal nature of agricultural work is the implicit guiding thread. He also shows that *capitalism needs poor peasants* to perform the function of suppliers of *cheap*, and one should add *seasonal*, labour. Here he would seem to be confirming the thesis I put forward at the beginning of this essay:

²⁴ Göran Djurfeldt, “Classical Discussions of Capital and Peasantry: A Critique”, in John Harriss (Ed.), *Rural Development. Theories of Peasant Economy and Agrarian Change*, Routledge, London, 1992, p. 139-140.

“agricultural capitalism can only exist in symbiosis with poor peasants, prepared to (and desperate to) sell their labour some days a year.” However, arguing with Karl Kautsky (who would have said that the problem for large exploitations is the shortage of labour; see below) he says that *“poor peasantry is not an integral part of the concept of the capitalist mode of production in agriculture*, but rather an indicator of a process of atypical reproduction” (p. 142), which he attributes to the crisis in European agriculture unleashed by competition in the international grain market. According to Djurfeldt, this crisis would explain why “...the capitalist farms could not reproduce themselves with free wage-labour...” and why “the farmers were forced to circumvent the ‘freedom’ of the labourers by setting them on the land” (*Ibid.*). But let us examine some of Kautsky's statements in *The Agrarian Question*²⁵ where he indeed (although implicitly) states that *peasantry is an integral part of the capitalist mode of production in agriculture*, albeit for demographic reasons:

Market expansion and capital possession are insufficient, by themselves, to establish a big capitalist agricultural unit: the essential are *the workers...* Urban industry in civilised countries has no need to feel afraid of a lack of workers, because the proletariat is increasing and provides growing capital labour force in continued progression... In agriculture the same does not happen. Work in cities takes place under conditions which make the worker incapable to work the land. Agriculture today cannot feel its gaps with the urban industrial proletarians. *Neither can the big capitalist units, in present circumstances, produce the necessary workers and retain them at their service...* [While] in modern industry domestic administration and firm management are two different things and the worker can create a household without becoming a boss...agriculture does not separate itself from domestic administration, *as there is no producing unit without domestic unit*, nor any regular and stable peasant household without an agricultural unit...[In the countryside] the worker which possess nothing but lives in his house is an exception...The labourers with their own household are usually independent farmers with their own or leased land *and which dedicate part of their time to wage labour and part to the cultivation of their plots...* This situation does not promote the multiplication of workers without land in the countryside. House servants are mostly excluded from marriage...Not much better is the condition to have children among the free salaried workers. *Only the tenants or small proprietors, which unite an autonomous household to an autonomous agricultural unit are in better conditions to raise many children to work...* This production of labour force diminishes where big units expand at the expense of the small ones. Expropriating the cultivators, a producing unit grows but the number of arms for its cultivation diminishes. *This fact by itself explains why, despite their technical superiority, big units do not reign by themselves in a country...* Under the capitalist mode of production we should neither expect the end of the big agricultural unit nor the end of the small. [A propos of this, Kautsky cites an article by Marx from 1850 in which Marx says: “As long as burgeoise relations subsist agriculture most move continously in this cycle of land concentration and land splitting”]. (pp. 167-173; see Graph 3 with Kautsky's figures on this).

7. Agricultural seasonality and peasant survival. A Polemic with Armando Bartra

Armando Bartra, a compulsory reference in any analysis of the peasantry in Mexico, has compiled and published his essays on the peasantry and other Mexican agricultural issues written over thirty years, in a book called *El capital en su laberinto. De la renta de la tierra a la renta de la vida* (“Capital in its labyrinth. From land rent to life's rent”) However, the cover contains another, less formal sub-title: *Ensayos rústicos sobre perversiones agrarias*

²⁵ (Ediciones de Cultura Popular, México, 1974; written in German in 1898). The text comes from the section “Lack of Labour Power” in the chapter on “Limits of capitalist agriculture”. I have translated from Spanish because I have not had access to the English Edition of the *Agrarian Question*.

(“Rustic essays on agrarian perversions”). In a public presentation of his book, to which I was invited to comment, I began my part of a dialogue with Armando Bartra which I subsequently continued in my column called *Moral Economy* in the Mexican daily newspaper *La Jornada*. On reading Bartra, I became more conscious that agricultural seasonality on which I had based the outline of the theory of peasant poverty (presented in section 4 above but conceived decades ago)²⁶ contains another equally important implication: it explains the survival of the peasantry almost all over the world despite the predictions of both the left and the right about its imminent disappearance. In answer to the question as to why peasants have not been crushed by all-powerful capitalism, on the basis of the analyses and implications of the text in the preceding sections, I answer that capitalism could not function in a pure fashion in the agricultural sector. There would be no-one to provide the seasonal labour it requires. Capitalism in agriculture is only viable when it coexists with the peasant economy. Like the haciendas in our past, which, in exchange for a plot of land they could cultivate, obtained free peasant labour, capitalism must live in symbiosis with the peasantry if it is to function.

Conversely, Bartra’s answer is based on *land rent*. In the “Preface,” (“On Rustic Debates”) he engages in a discussion with Blanca Rubio who, in *Explotados y excluidos. Los campesinos latinoamericanos en la fase agroexportadora neoliberal*, posits that world neoliberalism has eradicated land rent. Armando Bartra remarks:

“For those of us who think that in the processes analysed within the concept of land rent lies...the origin of one of the basic, terminal contradictions of the totally commodified mode of production, the announcement of the death of rent is a key event. Let see why. The primary rent is differential rent; moreover, absolute rent is actually differential rent, since it is paid in proportion to output. And *differential rent is unavoidable when the same goods produced with different costs are regularly sold at the same price*. These *cost disparities* originate in the diverse productive response of diverse natural resources. Obviously, this happens only when the level of demand is such that it makes the most favorable qualities of these resources scarce and thus forces one to work in less productive conditions, since the higher costs of these additional harvests will be imposed as market regulating prices. This fact implies an overpayment or differential rent to producers operating in better conditions. Understood in this way, differential rate is consubstantial to capitalism and...favours those capitals controlling agricultural production in detriment of the remaining capitals” (pp.20-21).²⁷

Armando Bartra explains the disappearance of land rent that Blanca Rubio seems to postulate (in Bartra’s perception) by noting that the biotechnological revolution has transformed agricultural production in such a way that today, thanks to intensification and high yields, supply depends far less than before on harvests contributed by marginal areas,

²⁶ The first published version of this approach was as a section (pp. xlivi- li) of the *Presentation* I wrote for the book *Economía popular. Una vía para el desarrollo sin pobreza en América latina*, Regional Project to Overcome Poverty in latin America, UNDP, 1991, Bogotá, Colombia.

²⁷ Whereas absolute land rent is the portion of rent that corresponds to any unit, differential rent is associated with agricultural yields determined by the varying degrees of land fertility. Insofar as these differences cannot be overcome, sale prices must be fixed at a level that makes production in less fertile lands profitable, thereby producing differential rent. Conversely, productivity differentials in industry are attributable to technological differences which, while they last, produce *extraordinary surplus value*, which will disappear once more productive technology becomes more widespread. If agricultural producers in the best lands are also the land owners, differential rent will appear to them as a higher rate of profit, higher than the one obtained by capital in other branches, thereby interfering with the tendency towards equalisation of the rates of profit between capitals. Perhaps because of this, Bartra says that this privilege of agricultural capitals harms the remaining capitals.

meaning that differential rent is subject to an irreversible declining trend (p.23).²⁸This is how Bartra explains his statement about the importance of the death of land rent, exploring the central question of our dialogue: “And it is there, in the perversions of rent, that one of the structural reasons for the permanence and reproduction of the peasant economy in advanced capitalism lies: the fact that peasants [or domestic producers as Bartra calls them frequently] can be forced to work below average profits and on occasions, at the simple point of equilibrium” (p.21). The thesis is made more explicit in the following passage:

“And in a hyper technified agriculture of productivities that tend towards homogeneity, small farmers capable of operating at a disadvantage and sacrificing profits, become redundant. Because if there is no differential rent, there are no peasants, since insofar as it is possible to supply demanded quantities without resorting to harvests with structurally unequal yields, it will no longer be necessary to offset burdensome agricultural rents through non-capitalist commodity producers operating on the worst lands...” (p.23)

The last two quotes clearly express Armando Bartra’s thesis: peasants are essential as a buffer mechanism for land rent. This is because peasants, petty commodity producers, do not pursue the obtainment of profits and can therefore function and reproduce at lower prices than would be required by a capitalist unit in the same lands, thereby reducing the amount of differential rent.²⁹ This function of the peasant economy would explain its persistence.

Yet Bartra, like few others, lucidly explores agricultural seasonality and the capitalism-peasant-economy-symbiosis (even though he refers to peasant economy as domestic economy) derived thereupon:

“...the contradiction between the discontinuity in farm work and the salaried reproduction of labour, a problem that the absolute market system is incapable of overcoming, at least in an orthodox fashion. The point is that capitalism, which works well with specialised, continuous processes that make the use of means of production and labour profitable, falters when its consumption is syncopated by force as happens with agriculture, subject to natural cycles, where labour requirements are concentrated in sowing and harvests. The entrepreneurs’ strategy involves externalising the contradiction by hiring temporary day labourers. But the system does not accept externalities and if the direct employer does not pay more than the time worked, society as a whole would have to assume the costly integral reproduction of seasonal workers. Luckily for global capital, the domestic economy is there to support part-time day labourers through production for self-consumption. By lowering the cost of commercial harvests, the self-supply economy that supports seasonal day workers not only benefits businessmen in the countryside but also solves a serious problem for the global capitalist system” (pp. 24-25)

And here Bartra begins his dialogue with me (p.25): “So important is the discontinuity of labour which characterises agriculture, that the economist Julio Boltvinik locates there part of the existing asymmetries between peasants and agro-businessmen, since whereas the former, he says, have to assume the costs of days not worked, the latter do not”. (*Economía Moral*, in *La Jornada*, June 14, 2002”). Bartra omits to point out that the ideas developed in this article are part of the outline of a theory of peasant poverty. There is an element that escapes his grasp (although he has it in front of him the whole time): *that the persistence of the peasant economy can be explained more by the function as provider of cheap,*

²⁸Bartra opposes the thesis of the death of land rent with ecological arguments. This enthralling discussion is, however, outside the nucleus of this essay and my dialogue with Armando Bartra.

²⁹Bartra discusses the operating logic of the Peasant Socioeconomic Unit in the chapter on “Intrinsic Rationality of Domestic Economy”. (pp. 281-324).

temporary (seasonal) labour, without which capitalism in agriculture is inconceivable, than by smoothing differential land rent.

In the chapter entitled, “Marx, necessary but insufficient,” Bartra places side by side the contradictions in the market of agricultural products, caused by the differential yields with which different portions of the same class of goods are produced (which gives rise to differential land rent), and the “contradictions created in the labour market and in the conditions for reproduction of rural day labourers by the marked discontinuity of labour demand in virtually all crops” (p. 187). Bartra posits that in precapitalist societies the fluctuating, seasonal nature of work requirements, characteristic of the activities subject to natural cycles, was dealt with through the diversification of economic activity, which contrasts with the fact that modern capitalist society requires specialization, as shown in plantations. “From the point of view of the capitalist business production unit, there is nothing irrational about cyclically hiring and firing a large mass of workers, yet from a global perspective, part time use of the agricultural labour forces assumes a series of contradictions...if the individual entrepreneur only pays for the days that have been worked, *society will somehow have to produce the rest of the income necessary for the subsistence of the seasonal employee...*” (p. 187).

The author then goes on to discuss the class nature of the peasantry and points out that “this class, which I shall call the *peasant class*, has been defined on the basis of a double link with capital: petty commodity production and the reproduction of the partially salaried labour force” (p. 188); and then adds: “Unlike the proletariat, the peasantry constitutes a class subjected to multiple, complex exploitation relations in which the extraction of the *surplus* through an unequal exchange in the market and the obtainment of *surplus value* through part-time wage labour are combined” (p.189). As one can see, Bartra considers that the performance of seasonal work is a constitutive element of the peasant class.

In the chapter on “The exploitation of peasant work by capital,” Bartra discusses the ways in which peasants are exploited. He identifies the unequal exchange of products as the most important (a propos of which he cites a peasant saying: “It’s the law of St. Marcelo, buy high, sell low”) but he also analyses, among other forms of exploitation, the kind that occurs through wage labour. He points out that the peasant sells part of his labour force because his income as a direct producer does not suffice to guarantee simple reproduction (p. 266), *but he does not ask why this income is insufficient*. Conversely, he argues that since the income the peasant seeks in wage labour is only a complement to his income from the plot of land, he is prepared to work for a salary below the value of his labour force. Thus, the *over-exploitation of peasant salaried labour* can be permanently sustained, whereby the peasant can subsidise the capitalist. The “over-exploitation of peasant labour is the ‘normal’ situation produced by the peculiar market where peasant production is articulated with capital” (p. 270).

In my view, these different forms of peasant exploitation pale in comparison with the main form of exploitation: *by absorbing the peasantry the total cost of agricultural seasonality* (a feature derived from nature itself), even if there were no other forms of exploitation, it is condemned to permanent poverty and obliged to be an itinerant in search of subsistence.

My thesis in this fundamental point of the dialogue is: *without the peasants’ supply of seasonal labour, capitalist agriculture would be impossible*. There would be (virtually) no-

one prepared to work only during the harvests. *The persistence of peasant agriculture therefore makes agro-capitalism possible.* Given the rules of the game (“you work, you get paid, you leave”) and given the formation of prices in markets in which peasant and capitalist farmers concur and in which the aforementioned rule prevails, only the days worked are incorporated into production costs and therefore reflected in farm prices. The peasant farmer therefore obtains an income from his plot of land that is approximately equal to the value of his labour force for the days effectively worked. Since he and his family have to eat every day, he is obliged to attempt to complement his income by becoming an *itinerant pauper*. *Pure capitalism, I conclude, is impossible in agriculture.*

On March 20 in *La Jornada*, in his article, “The Peasant in his Labyrinth,” Armando Bartra replies to the contents of the issue of *Economía Moral* of 16/03/07, in which I had contrasted some of his theses from his book *El Capital en su laberinto*, with the central thesis of my essay, “Towards a theory of peasant poverty,” a summary of which was published in the 14/06/02 column. Above all, I must say that I feel honoured by the privilege of engaging in this debate with Armando. The fact that the initial version took place in the pages of *La Jornada* also shows that the importance of this newspaper is reflected, as always, in a top-level discussion of national problems. In order to lend the debate greater transparency, allow me to reproduce my central thesis (even though this involves a repetition of what was said in previous sections):

Peasant poverty is determined by the seasonality of agriculture and the fact that in capitalism, prices only incorporate (as costs) the wages of days that have effectively been paid for. Since peasant producers take part in the same markets as capitalist firms, and act as price takers in them, *the prices of their products can only pay for days that have been effectively worked.* In other words, *the social cost of seasonality is absorbed by peasants with an extremely high human cost and permanent poverty. Peasants are forced to seek additional income outside their plots of land.* If the peasant economy did not compete with the capitalist economy, it could transfer the cost of year-round family maintenance to the consumer, via prices. *This explains agricultural subsidies in developed countries, through which the social cost of seasonality is transferred to society as a whole, thereby expressing the social recognition of the right of family economic units (peasants and farmers) to decent living standards. This prevents them from having to degrade their status by temporarily hiring their labour in an itinerant fashion. When this right is not acknowledged, peasants are condemned to permanent poverty.* The correct policy for third world countries, if they wish to reduce rural poverty, is not to combat the agricultural subsidies of first world countries but also to subsidise their peasants and protect them from (subsidised) overseas prices.

In the 16/03/07 issue, in a discussion with Armando, I extended this proposal to the thesis that the survival of the peasantry (contrary to the predictions of Tyrians and Trojans), can be explained by the fact that capitalism cannot exist in a pure form in agriculture: without the peasants' supply of seasonal labour, capitalist agriculture would be impossible, as I pointed out earlier. There would be (virtually) no-one prepared to work only during the harvests. The permanence of peasant agriculture therefore makes agro-capitalism possible. The price setting rule in markets in which peasant and capitalist farmers concur is derived from the rule imposed on the agricultural day labourer (“you work, you get paid, you leave”): only the days worked are incorporated as production costs and therefore reflected in agricultural prices. The peasant farmer therefore obtains an income from his plot of land that is approximately equal to the value of his labour force for the days effectively worked. Since he and his family have to eat every day, he is obliged to attempt to complement his income by becoming an *itinerant pauper*. The rule that operates is “you produce, you sell and you go off to find work.” This contradicts the thesis put forward by Bartra who, forgive

me for the repetition, holds that:

if there is no differential rent, there are no peasants, since insofar as it is possible to supply demand without resorting to harvests with structurally unequal yields, it will no longer be necessary to offset burdensome agricultural rents through non-capitalist commodity producers operating on the worst lands..."

Bartra makes three comments which he enumerates: *Firstly*, he points out that the peasant's exploitation is *polymorphous*, while his existence is *plurifunctional*. He is exploited not only as he absorbs the costs of the seasonality of agricultural work (the central feature of my theory of peasant poverty) but also when he sells his labour force and when he migrates. *These other forms of exploitation can obviously not be denied.* In "Towards a theory of peasant poverty" (which I have reproduced with some changes in the previous sections), I held that

"In Mexico, family agricultural producers live in abject poverty because: 1. their productivity levels are far below those of their competitors: Mexico's capitalist producers and US and Canadian producers; 2. because labour is undervalued in the country, particularly in rural settings and 3. because the costs of seasonality are bore almost exclusively by peasants."

There is one difference that should be stressed: when I say that peasants absorb the entire costs of seasonality, I do not mean that they are exploited in this way by capital but by society as a whole: everyone pays lower prices for food and therefore receives a subsidy from peasants. *Peasants are poor because they subsidise us all.* If we did subsidise peasants (and only them, since capitalist agriculture does not need these subsidies because it does not absorb the cost of seasonality) society as a whole would absorb this cost through taxes. If we intervene in price setting, we could make consumers absorb this cost in the form of relatively higher food prices, such as those that prevail in the first world (they say that in Japan, a fillet is more expensive than a DVD; whether or not this is true, it conveys the idea clearly).

Secondly, Bartra points out that the most important difference between his proposal and mine is not in the diagnosis but in the solutions: whereas I propose the subsidy route, he holds that although subsidies are not wrong, the real solution would be agricultural diversification. Bartra exemplifies his argument with Cuba's (virtually) *monocrop* sugar economy. This is a good example in two respects. On the one hand, because it takes the argument to an extreme; plantations constitute an extreme case of *monocropping* agriculture which exacerbates the seasonal demands for labour. And on the other, because typical plantation crops, particularly when they require an industrial process for transforming the product, such as sugar-cane, cotton and coffee, exceed the scale of the family unit and involve serious difficulties for maintaining the autonomy of family agriculture. There would be no point in investing in a sugar refinery unless the supply of sugar cane is guaranteed, which leads (given the importance of the cost of transport) to heavy pressures to ensure that the land in the zone of influence are used for this crop. But a peasant family that cultivates sugar cane in a 2 to 3 hectare plot of land will be overwhelmed during the sugar harvest by labour requirements. That is why in Mexico, peasants in sugar zones often become rentiers-wage-workers: the sugar refinery hires workers for the sowing, harvest pays for transport and carries on the industrialisation of the crop while the peasant rents his plot of land and sells his labour force. The sugar industry is an example of the limits (or obstacles) that may be faced by the path of diversification. Cuba took this to an extreme by depending on this industry to obtain foreign currency. But

if one seeks food sovereignty, it is difficult to entirely dismantle sugar production. Another example of these limits is imposed by technology: if one wishes to use mechanical harvesters, for example, economies of scale lead to monocropping. Since diversification is highly desirable for a peasant unit, the question is why observed trends are going in the opposite direction: why peasant exploitations are increasingly less diversified and why *the milpa* fields (a very antique and highly diversified way of using land in Mexico) are disappearing. In diversified units, the difficulties involved for commercialization, credit and knowledge required, are also diversified. Monocropping or a few crops prevail in capitalist units. The Europeans, Japanese and Americans have opted to subsidise their farmers without demanding or imposing diversification. Armando is right, diversification not only entails the fullest use of human resources and often land (such as the bean-maize combination in which the former fixes the nitrogen used by the latter) but also enormous ecological advantages. Since Armando does not reject the route of subsidies and I do not reject the advantages and benefits of diversification, the difference is only one of emphasis: my thesis is that the main policy instrument should be subsidies whereas Bartra focuses on diversification as the main solution. The real solution, however, is the eradication of capitalism, which is incompatible with agriculture.

Thirdly, Bartra points out that he does not hold that the end of land rent has arrived and with it, peasants' *raison d'être*. I had understood that, in the discussion of Blanca Rubio's book, Bartra accepted this conclusion. I am glad that point has been cleared up. Our outstanding expert on peasantry points out that *capitalism believes that it has achieved its dream of transforming agriculture into another branch of industry* (where there is no land rent or it becomes irrelevant) and that, by shifting from *latifundia* to transgenic crops—from land rent to the rent of life—(through the appropriation of life as industrial property that can be patented)—“capitalism jeopardises human survival.” A propos of this, in his book *El capital en su laberinto*, he points out that:

The greatest danger of patenting life does not lie in the enormous profits this monopoly would yield. The greatest threat lies in the *throwaway nature* acquired by natural ecosystems when the point is to subject agricultural production to the use of seeds that have been manipulated. The risk is that once tissue sample and genetic codes have been privatised *ex situ*, there is no longer any need for biodiversity *in situ*—of nature qua nature. Today, the self-interested, irresponsible use of transgenic seeds is what threatens biodiversity and human survival (p.24).

On the basis of this powerful argument, he suggests that our dialogue should extend to ecological issues, which I have not broached, since the “persistence of the peasantry as a living inheritance, as capitalist recreation and as a utopia does not refer as much to the resulting economic phenomena –land rent, the cost of seasonally used labour— as to the radical contradiction between big money and the reproduction of nature: a terminal antagonism pointed out by Marx, taken up by Polanyi and emphasised by modern ecologists.” I totally agree with the thesis on the predatory nature of capitalism, but not only in agriculture: Suffice it to recall climate change to have this present. I do not agree, however, with the minimisation of the importance of my thesis on rural poverty with which Armando's article ends: “The fact that by operating in agriculture capitalism distorts the price setting mechanism is a minor issue...” It cannot be minor because this “distortion” explains the poverty of thousands of millions of peasants. Capitalism does not only pillage nature. It brutally pillages, now that it is globalising poverty with more strength than ever, human reproduction itself, it pillages the human species itself. In other words, capitalism

pillages subject and object, making its abolition an urgent task which, nonetheless, seems unattainable. Unfortunately, this will probably only occur after a long period of natural and social cataclysms whose monstrosity we cannot even imagine.

8. Obstacles to capitalist agriculture: the Mann-Dickinson thesis

As I pointed out in the section 5, Frank Ellis found two reasons for the persistence of the peasantry in the Marxist bibliography on peasants: on the one hand, the indirect exploitation of the peasantry by capitalism through what Henry Bernstein calls “a squeeze towards simple reproduction” (capturing any surplus created) and on the other, the difference, identified by Marx in *Capital, between the duration of the agricultural productive cycle (production time) and the time when work is productively employed (working time)*, which refers to the seasonal pattern of the use of labour, a factor that constitutes the core of the outline of my theory on poverty and the persistence of the peasantry. As for the second reason, he only cites the Mann-Dickinson thesis (published in 1978), which I shall now examine³⁰. In a subsequent book (1990), Mann warns that what they hold is very similar to what Ariel José Contreras had said a year earlier (1977) in an article in the *Revista Mexicana de Sociología* that went unnoticed in the bibliography in English.³¹

Mann and Dickinson begin by verifying the non-fulfilment of the prediction about the generalisation of capitalism in world agriculture. They also point out that even in the centres of industrial capitalism farms based on family work (family farms) are strikingly vital. They add:

“Thus, even in advanced capitalist countries, we are confronted with a significant anomaly: the persistence and co-existence of rural petty commodity production alongside a dominant capitalist mode of production. *Capitalist development appears to stop, as it were, at the farm gate*”. (p.467, my italics).

They point out that this persistence is a challenge to Marx's notion of the universality of capitalism and that the purpose of their article is to fill in the gap about the unequal development of capitalism within advanced capitalist countries by analysing some of the reasons for the persistence of non-capitalist production units in their agriculture. “Far from arguing that this ‘anomaly’ refutes or undermines Marx’s analysis of the process of capitalist development, we intend to demonstrate that it is only with the use of Marxian categories that this ‘anomaly’ itself can be adequately explained”. They discuss Marx's conception of the transitional nature of petty commodity production (PCP), derived from his analysis of the tendency towards the differentiation of classes within PCP, encouraged by market competition, in which the price of commodities drops continuously as a result of capitalist innovations, which destroys the old forms of production. This prediction of Marx is intended to be of universal scope, say Mann and Dickinson, and “The demonstration that Marx’s analysis could be generalised to the countryside was perhaps the essential achievement of Lenin’s *Development of Capitalism in Russia*”. They add that this view of the instability of PCP was shared by Plekhanov, Kautsky and Mao Tse-Tung (p.469).

³⁰ Susan A. Mann and James M. Dickinson, “Obstacles to the Development of a Capitalist Agriculture”, *Journal of Peasant Studies*, vol. 5, N°4, pp.466-481, 1978.

³¹ Mann’s book is: *Agrarian Capitalism in Theory and Practice* (The University of North Carolina Press, 1990). Contreras’ article is: “Límites de la producción capitalista en la agricultura”, *Revista Mexicana de Sociología*, vol. 39, N° 3, pp. 885-889.

They end by saying that several writers on rural development have interpreted the persistence of family farms as a refutation of Marx's prediction about the transitional nature of PCP, since in fact, "*the family farm had managed to "capitalise" without becoming "capitalist"*" (my italics). In order to explain this persistence, many have resorted to non-Marxist theories, say Mann and Dickinson, who examine two groups of these theories. In the first group, they place Alexander V. Chayanov, who had highlighted the fact that the family peasant unit does not seek to obtain profits and therefore continues producing, even though it does not obtain the average rate of profit, which gives it an advantage over capitalist units. Among the criticisms elicited by this approach, Mann and Dickinson stress that it isolates the family unit from capitalist surroundings and the one I find most convincing: *its argument about a general advantage of PCP cannot explain the disappearance of urban forms of PCP (artisan production)*. The second group, they say, involves a sort of technological determinism in which improved agricultural technology is the basis of the persistence of family farms. For example, threshing machines make it unnecessary to hire numerous workers. (See Graph 4 availability of agricultural machinery in 19th- century France. Mann and Dickinson say that this group of theories does not explain why PCP and capitalist production coexist in the same production sphere and with similar technological conditions, or why more prosperous family firms do not continue expanding production until they reach and exceed the point at which they would need to hire non-family labour.³² None of these approaches considers that Marx's theory offers an adequate explanation of the persistence of family farms, say Mann and Dickinson, but "we hold that a closer scrutiny of Marx's writings, particularly the *Grundrisse* and Volumes II and III of *Capital*, reveals a number of important insights" (p.471). Before analysing these ideas, Mann and Dickinson state that: 1. they are formulated in terms of the labour theory of value; 2. Marx does not deal with agriculture as a monolithic whole but makes certain internal distinctions; and 3. Marx emphasises the nature of the *dominant mode of production* in capitalism, which is why the persistence of PCP should be sought not in the internal dynamics of family work but rather in the requirements of capitalist production itself [I think that there is a false derivation here, a non-sequitur]. From this they abruptly derive the conclusion [which does not follow either] that it is the peculiar nature of certain spheres of agricultural production that makes them unattractive for capitalistic penetration (pp. 470-471).

Mann and Dickinson, in their 1978 article and Mann in her 1990 book, like Ariel José Contreras, focus their identification of obstacles to the development of capitalism in agriculture (which for them would explain the persistence of non-capitalist forms of agricultural production), in: *the difference between working time and production time* (a conceptual distinction made by Marx in Book II of *Capital*) and in other natural characteristics such as the perishable nature of the products that affect commercialisation

³² Mann and Dickinson cite two authors on this but omit perhaps the most important one: John Brewster, who, in his classic article on the process of the machine in agriculture and industry ("The Machine Process in Agriculture and Industry", in Karl A. Fox and D. Gale Johnson, *Readings in the Economics of Agriculture*, Allen & Unwin, London, 1970), which has been examined in section 5 above, explain that whereas in mechanized agriculture, activities continue to be sequential (sow in April, harvest in October), in mechanized industry, all activities are simultaneous and that this difference leads to a change in social structure in industry (the number of persons working simultaneously is far larger than the size of a household) but not in agriculture, where mechanized methods are as compatible as manual techniques with family or multifamily units. For further analysis of Brewster's thought, see section 5 above.

and the natural risks that tend to affect productive results.

Mann and Dickinson cite a key paragraph in Volume II of *Capital* in which Marx says that working time is always production time (defined as the time in which capital is trapped in the production process), although not all production time is necessarily working time. Marx explains this difference by pointing out that production time consists of two parts: a period in which work is applied to production and a second period *in which the unfinished commodity is abandoned to the influence of natural processes*. Although Marx provides various non-agricultural examples of this second stage (drying pottery, whitening cloth, fermentation), he highlights the fact that this phase is particularly important in agriculture and gives the example of cereals in which *there is a long period when working time is suspended while the seed matures in the earth*. Mann and Dickinson state that “the non-identity of production time and labour time establishes a whole series of obstacles to the capitalist penetration of certain spheres of agriculture” (p.473). They add that “this becomes apparent when we look at its effect on the rate of profit” and at the process of circulation and realisation of value. They analyse these two issues in the following two sections. In them, however, there is a predominantly partial, static analysis. For example, they state that, all other things being equal, the more rotations capital makes in a year, the higher the profit rate will be, which is obvious and not in doubt, yet this does not lead to the conclusion that therefore “capital will shy away from such areas of production” (p.474). This conclusion is similar to Contreras's: “In addition to the greater length of time of agricultural capital rotation in relation to the length of industrial capital rotation, other factors contribute to *containing the development of capitalist production*” (p.890).

In my opinion, these conclusions are based on a partial analysis that does not consider that the rate of profit effectively obtained by capital in any sector depends on production prices rather than exchange values, as Marx shows in Volume III of *Capital* when he analyses the tendency towards the equalisation of the rates of profit between different branches of production. Just as production prices move away from values to compensate for the differences in the organic composition of capital in order to equalise the profit rate, they will also do so to compensate for the length of production time and slow capital rotation. If this were not the case, the construction industry, for example, which often has longer production periods than annual cycle agriculture, could not be capitalistic. The most interesting part of Mann and Dickinson's article, in my view, is the last section. There, they point out that:

“the seasonal hiring of wage labour, which is a reflection of the non-identity of production time and labour time, presents any capitalist with labour recruitment and management problems. As the buyer of labour power, the capitalist must either attract and maintain his ‘temporary’ work force by offering high wages or rely on the most desperate and marginal elements in society as in the use of rural migrant labour”(p. 477)

In the first sentence, the authors establish a link between the seasonality of work and the differences between working and production time (See, in Graph 5, the evolution of the seasonality of the requirements for unskilled labour in cotton as a result of technological changes). These are obviously two sides of the same coin, two ways of looking at the same phenomenon, and therefore the *starting point* of their explanation for the persistence of non-capitalist modes of production (family farms in their case) is the same as my explanation of the persistence of the peasantry. However, I present it as follows:

"capitalism cannot exist in a pure form in agriculture: *without the peasants' supply of seasonal labour, capitalist agriculture would be impossible. There would be (virtually) no-one prepared to work only during the harvests. The permanence of peasant agriculture therefore makes agro-capitalism possible.*" In other words, peasant agriculture is not only functional but also essential to the existence of capitalist agricultural firms. But a peasant will only be obliged to sell his labour seasonally (and be prepared to sell it cheaply) if he is poor. rich farmers in USA can (and do) spend the periods when there is no farm work drinking beer. In other words, agricultural capitalism can only exist in symbiosis with poor peasants, prepared to (and desperate to) sell their labour some days a year. A theory that explains peasant survival must also explain their poverty."

My starting point is seasonality; my answer to the persistence of the peasantry is its symbiosis with agricultural capitalism. I think that the fundamental difference is that Mann and Dickinson are trying to analyse why *family farmers* survive (which, as I have said, are not poor and spend the periods without work drinking beer) whereas my question concerns the persistence of *peasants*. Their starting point is the excess of production time over working time in certain spheres of agriculture (the other side of the coin of seasonality) and their response is that for capitalism this represents an inefficient use of capital, lower profit rates and circulation problems, which means that these agricultural spheres *are not attractive to them*. In other words, family farms survive because capital is not interested in taking away their field of business, as opposed to what is forcibly argued by John Brewster, whose ideas were discussed above. Mann and Dickinson's merit (shared by Contreras) consists of having highlighted Marx's perception of the specific features of agriculture and their significance for capitalism.

9. Marx and his Vision of Agriculture

In order to begin exploring Marx's thought on the subject, I use Mann-Dickinson and Contreras' references to Volumes II and III of *Capital* and *The Grundrisse* as a starting point. Contreras says:

"In industry, labour is nearly always used during the entire period of the production process, therefore working time and production time coincide. Conversely, in agriculture, *working time always includes a shorter period than production time...* This is due to the fact that agricultural production goes through a phase of natural crop growth in which none or very little additional work is required. "The lack of coincidence between production time and working time –says Marx [in the *Grundrisse*] —can only be due to natural conditions..."³³

Mann and Dickinson, who also refer to this passage, begin by citing the first paragraph of Chapter XIII of the Second Book of *Capital*:

"Working time is always production time, i.e. time during which capital is confined to the production sphere. But it is not true, conversely, that the entire time for which capital exists in the production process is necessarily therefore working time" (Volume II, p.316, Penguin Books, 1978)

The passage continues as follows:

"What is at issue here are not interruptions in the labour process conditioned by the natural limits of labour-power itself... What is involved is rather... an interruption conditioned by the nature of the product and its production, *during which the object of labour is subjected to natural processes of shorter or longer duration,...* while the labour process is either completely or partially suspended... After grapes have been pressed, for instance, the wine must go through a period of fermentation, and then also rest for a while before it reaches a certain degree of readiness... Winter corn needs nine

³³ José Ariel Contreras, "Límites de la producción capitalista en la agricultura", Revista Mexicana de Sociología, vol. 887-888. The quote from Marx is from p. 191 of Vol. 2, in *Elementos fundamentales para al crítica de la economía política (Grundrisse) 1857-1858*, Siglo XXI editores, 1972.

months or so to ripen. Between seed-time and harvest, the labour process is almost completely interrupted...In all these cases, additional labour is added only occasionally for a large part of the production time...therefore, the production time of the capital advanced consists of two periods: *a period in which the capital exists in the labour process, and a second period in which its form of existence –that of an unfinished product- is handed over to the sway of natural processes, without being involved in the labour process*" (op. cit., pp. 316-317)

Mann-Dickinson return to *The Grundrisse* but fail to see, probably because they do not want to, a key sentence in the text from which they take certain phrases, which is a brief section (Penguin Books. 1973, pp.668 – 670 of Notebook VI) called "Difference between Production Time and Working time.-Storch." Marx begins by eliminating the assumption of equality between working time and production time, exemplifying their lack of coincidence with agriculture in which work is interrupted during the productive phase. Marx clarifies the fact that if the problem were the greater length of working time in one case, it would not have been a (special) case. What makes it a special case (and a problem) is the interruption of work before the end of production time, since two different products (an agricultural and an industrial one, for example), could therefore incorporate the same working time, but in the product with longer production time (the agricultural one) the rotation of the capital cycle would be slower. Marx adds something (note the first phrase in italics that shows what Mann-Dickinson do not want to see, which destroys their entire argument):

“The fixed capital here allegedly acts quite by itself, without human labour, like e.g. the seed entrusted to the earth’s womb...The time required here for the product to reach maturity, the interruptions of work, here constitute conditions of production. Not-labour time constitutes a condition for labour time, in order to turn the latter really into production time. *The question obviously belongs only with the equalization of the rate of profit.* Still, the ground must be cleared here. The slower return –this is the essential part – here arises not from circulation time, but rather from the conditions themselves in which labour becomes productive; it belongs with the technological conditions of the production process...*Value*, hence also surplus value, *is not = to the time which the production phase lasts, but rather to the labour time, [both] objectified and living, employed during this production phase.* The living labour time alone...can create surplus value, because (it creates) surplus labour time”. [Foot note: “It is clear that other aspects also enter in with the equalization of the rate of profit. Here, however, the issue is not the distribution of surplus value but its creation”] (*Grundrisse*. Penguin Books pp. 668-669).

It is a central quote. On the one hand, it shows the untenability of Mann and Dickinson's central argument that capitalism has not appropriated agriculture because it is not sufficiently profitable, since this argument forgets that in capitalism capital mobility between branches of production leads to the equalisation of profit rates by means of the differences between production prices and values, redistributing capital profits. They also seem to forget that profit rates and surplus rates are extremely different (see Graph 6).

On the other hand, *the second phrase in italics shows that for Marx, value is always equal to working time objectified in commodities, even in the problematic case of agriculture.* Marx did not notice that interruptions in work raise a far more serious problem for the worker: if he does not work every day, where will he obtain the means of subsistence to go on reproducing and be available for capital when it wants to use him again? This in turn raises serious doubts about the theory of value, since Marx does not seem to have sorted out the value of agricultural labour force: is it the cost of its annual reproduction or just what is required to reproduce labour during the days in which he works effectively in agriculture? In Volume I of *Capital*, in which he deals with the value of labour force, Marx does not introduce the problem that occurs when work is discontinuous. And in volumes II and III,

when he deals with the special case of agriculture, he does not discuss the determination of the value of labour force again.

10. Marx's theory of value disregards discontinuous labour processes.

Marx clearly saw the seasonal nature of work in agriculture but he only expressed this perception in *Capital* in the Second and Third books but not in the First, where he develops the theory of the value of labour force, despite the fact that he was aware of the problem by then, as shown by the quote from *The Grundrisse* (written from 1857 to 1858, before *Capital*), included in the previous section. In the first five chapters of *Capital*, where he describes the essential features of his theory of value, he always assumes a *continuous process of work and equality between working time and production time*, both assumptions that Marx analyses in the Second and Third Books, finding that they do not hold true in certain productive processes, particularly in agriculture. In this section, I review some of these early chapters, highlighting the assumption of continuity in the process of work.

In Chapter I, Marx characterizes commodities as: useful objects or *use values*, which, as *crystallizations of abstract human work* (expenditure of labour force) are also *values* expressed in their *exchange values vis à vis* other commodities and whose *value magnitude* is determined by the socially necessary labour time required to produce them. But whereas abstract human labour is the only source of value, he adds (quoting William Petty) that *work is the father and nature is the mother of material wealth* (constituted by use values). Wealth (use values) increases when productive forces are developed, but the quantity of labour objectified in the commodities, their value, may remain the same or even be reduced.

In Chapter IV, Marx (having introduced in Chapters II and III the circulation of commodities and money that makes it possible) deals with the transformation of money into *capital* (money that increases its value).³⁴ He has not yet worked out how this is possible although he states that it cannot arise from circulation or money, only to resolve the enigma later by showing that the increase in value must be obtained from *the use of a commodity whose use value is a source of value: labour power (LP) or labour force*. Marx therefore sets out to undertake a detailed analysis of the peculiar commodity known as LP, which, like all commodities, has a value. Marx asks how this value is determined. The answer, central to the theory of *surplus value*, leads Marx (in my opinion) to *force the concept of production* so that LP can be conceived of as a *commodity that has been produced*. The answer only applies fully to continuous labour processes, where there are no interruptions in which the worker is left unpaid. I have placed my comments in square brackets and I omit certain phrases, indicated by an ellipsis:

“The value of labour-power is determined, as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this specific article. In so far as it has value, it represents no more than a definitive quantity of the average social labour objectified in it. Labour-power exists only as a capacity of the living individual. Its production consequently presupposes his existence. Given the existence of the individual, the production of labour-power consists in his reproduction of himself or his maintenance. For his maintenance he requires a certain quantity of the means of subsistence. Therefore the labour-time necessary for the

³⁴ Marx says: “In truth, however... By virtue of being value, it has acquired the occult ability to add value to itself. It brings forth living offspring, or at least lays golden eggs” (*Capital*, Penguin Books, Volume I, p. 255).

production of labour-power is the same as the necessary for the production of those means of subsistence, in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of its owner. [This phrase is literally false because it does not include the worker's "production" only his maintenance; neither does it include the production of his offspring, which Marx adds later]. However, labour-power becomes a reality only by being expressed; it is activated only through labour. But in the course of this activity, i.e. labour, a definite quantity of human muscle, nerve, brain, etc. is expended, and these things have to be replaced. Since more is expended, more must be received. [The foot note inserted here by Marx states that "In ancient Rome, therefore, the *villicus*, as the overseer of the agricultural slaves, received 'more meagre fare than working slaves, because his work was lighter' (T. Mommsen, *Römische Geschichte*, 1856, p. 810)]. If the owner of labour-power works today, tomorrow he must again be able to repeat the same process in the same conditions as regards health and strength. [In agriculture, *tomorrow's work* can be several month's away from today's work, but Marx's text refers to a chronological today and tomorrow, assuming a continuous work process]. His means of subsistence must therefore be sufficient to maintain him in his normal state as a working individual... The owner of labour-power is mortal. If then his appearance in the market is to be continuous, and the continuous transformation of money into capital assumes this, the seller of labour-power must perpetuate himself 'in the way that every living individual perpetuates himself, by procreation' [Marx quotes here Petty. Although the term *continuous* refers here to intergenerational it is evident that the whole argument is based on the assumption of continuity which, for that reason, leaves agriculture out]. The labour-power withdrawn from the market by wear and tear, and by death, must be continually replaced by, at the very least, an equal amount of fresh labour-power. Hence the sum of means of subsistence necessary for the production of labour-power must include the means necessary for the worker's replacements, i.e. his children, in order that this race of peculiar commodity-owners may perpetuate its presence on the market. [Here Marx omits the means of subsistence of those that look after children and perform domestic chores, without which there is no production of LP]. Some of the means of subsistence, such as food and fuel, are consumed *every day*, and must therefore be replaced *every day*. Others, such as clothes and furniture, last for longer periods and need to be replaced only at longer intervals. Articles of one kind must be bought or paid for every day, others every week, others every quarter or so on. But in whatever way the sum of total of these outlays may be spread over the year, they must be covered by the average income, taking one day with another". (*Capital*, Volume I, Chapter 6: "The sale and Purchase of Labour-Power". Penguin Books, pp. 274-276). [When Marx says *daily* he underlines the *continuous* nature of human consumption, but does not see any problem here, because he is also assuming a *continuous* labour process and *continuous* payment. Marx adds the following formula: Daily mean of commodities = (365A+ 52B+4C +...)/. 365. In Graph 7, I have done a calculation with a similar formula on the basis of the Standard Basket of Essential Satisfiers, CNSE, by Coplamar, in Mexico. See sources in Graph 7].

What happens when the *reality of discontinuous work in agriculture* is introduced into this theory of the value of LP? Since talking about the LP commodity obviously entails talking about capitalism, we would have to formulate the answer in terms of an economy with a significant agricultural sector in which all production was carried out on the basis of capitalist rules. In the following section, I attempt to show that this economy would not work, which would demonstrate what I have argued in previous sections of this paper, namely that pure capitalism in agriculture is impossible unless LP were paid for the entire year even though it were only used for part of it, with most of the cost being transferred to consumers.

11. Towards a valid theory of value for discontinuous work processes

In Book II of *Capital*, Marx deals with the "process of circulation of capital" and introduces a distinction between *working time* and *production time* which, in the case of agriculture, is the other side of the coin of the seasonality of work which, as I have held, is the main cause of the poverty and persistence of the peasantry. The most famous chapters of Book II are

chapter 20 and 21 which broach the Simple Reproduction Scheme, (SRS) and the Reproduction on a Expanded Scale Scheme. I will use the SRS to answer the question about what happens when discontinuous working time is introduced into the labour value theory. Although in this scheme, Marx assumes the absence of capital accumulation, which ignores an essential feature of capitalism, the scheme shows the basic logic of reproduction of the capitalist system.

In order to formulate SRS, Marx divides the economy into two sectors: Sector I, the producer of means of production and Sector II, the producer of means of consumption. In each of them, the total value of the production obtained is equal to the sum of the capital employed and the surplus value created (S). Marx divides the capital used into constant (C) and variable (V) capital. C represents the part of capital invested in means of production: machinery, buildings, raw and auxiliary materials, whose value is only transferred gradually to the product, which explains why he calls it *constant*. For its part, V is the amount invested in hiring labour power, a component of capital that Marx calls *variable* because *labour power is a commodity whose use value is the source of value* and, in the technical conditions of capitalism, of greater value than that which the labour force itself contains. Therefore, the total value (W_1) of the product in branch I is equal to $C_1 + V_1 + S_1$, and that of branch II is $W_2 = C_2 + V_2 + S_2$. W is therefore the sum of W_1 and W_2 , C the sum of C_1 and C_2 , and similarly for V and S . Every letter has a double meaning: On the one hand, it expresses part of the value of the product (meaning that, from this perspective, W is the *total supply*) and on the other hand, it expresses the income of someone (V of the workers, S of the capitalists while C is the income used to replace capital that has been worn out or used), in other words, in this sense, W expresses the *total demand*. Note that by definition, total supply and demand are the same, as in national accounting, in which the national income is equal to the sum of consumption and investment. Marx assumes, in SRS, that both workers and capitalists dedicate their entire income ($V+S$) to purchase means of consumption and that the income C represents is used entirely to replace the use or wear and tear on C . The system is therefore in a state of equilibrium and the production of value remains constant over time. Moreover, so that there is no disproportion between the two sectors of production, C_2 must be the same as the sum of V_1 and P_1 ($C_2 = V_1 + S_1$)³⁵ since sector II of means of consumption needs to buy from sector I of means of production, what it needs to replace the wear and tear on its means of production (C_2), while the capitalists and workers in sector I need to buy means of consumption from branch II for a sum equivalent to their income ($V_1 + S_1$).

Despite what has been pointed out about how alien SRS is to capitalism, it shows *how capital is reproduced*. But *it does not show how labour power is reproduced*. Human beings must satisfy their needs, whether or not they work. That is why, as I showed in the previous section with the long quote from Chapter IV of Book I of *Capital*, reproduction

³⁵ Paul M. Sweezy (*The Theory of Capitalist Development*, Monthly Review, New York, 1942/1970, pp. 76-77) derives this condition from two obvious equations of equilibrium: 1) In order for all the production of means of consumption to be sold, given the assumption that capitalists and workers spend all their income on consumption, the total value of Sector II must be equal to the income of capitalists and workers from both sectors, in other words: $C_2 + V_2 + S_2 = V_1 + S_1 + V_2 + S_2$; and 2). In order to only and exactly replace the capital worn out or used in production, the latter ($C_1 + C_2$) must be equal to the value of production in sector I ($C_1 + V_1 + S_1$), in other words $C_1 + C_2 = C_1 + V_1 + S_1$). Eliminating the terms repeated on both sides of the equals sign from both equalities, one arrives at the same an only one condition, referred to in the text:: $C_2 = V_1 + S_1$

not only includes those that work in exchange for a wage but also their children (and their spouses who look after the children and perform domestic work, although in the passage mentioned Marx forgets them). However, in principle, *if labour power is paid for according to its value and if work is continuous* (a person works all year, except for one day a week and other holidays, *which, however, are paid for without having to work*), *capital reproduction also entails that of the labour force* (and its families). But if work is not continuous, as in agriculture, the reproduction of capital does not entail that of labour power. If agriculture is capitalist, as it has to be in SRS (which is a scheme in which capitalism is the only mode of production), the value of labour power in Sector II (means of consumption) where we will place agriculture, will not be sufficient for the reproduction of the labour force. It will not be possible to achieve what Marx says: "If the owner of labour power has worked *today*, he must work *tomorrow* to repeat the same process under the same conditions of vigour and health." Change *today* for *during sowing time* and *tomorrow* for *during the harvest* and you will see that seasonal work does not meet this condition, since at the end of the sowing time, he will lack the means to be able to subsist until harvest time (See Graph 8 for the duration of this period). There will therefore be no available labour power for this task; the person that did the sowing will have died.

SRS requires a 3rd equation that will establish the condition for the year-round reproduction of the labour force and their families (365 days) in terms of the annual value of the means of subsistence of the number of workers and their families (T) and in each sector T_1 y T_2 . Let us call the daily value of the labour force v . So V is equal to the product of v times 365 days and times T: $V = V_1 + V_2 = v \cdot 365 \cdot T$. *This third equation, necessary for the capitalist to find someone to exploit in each productive cycle, negates the theory of value* that states that the value of a commodity is equal to the socially necessary work incorporated into it. In other words, *the third, necessary equation, is also impossible. This impossibility appears as the collapse of the theory of value*, which would be incapable of taking into account the reality of seasonal work in agriculture, unless we modify it so that the working time incorporated into the commodity is not just the live work incorporated by the worker during the days he works but also the value of his labour power during the days when he does not work every year. During the days when he does not work, he does not produce any new value but he transfers the value of the livelihood he consumes to the commodity he produces when he works, acting as constant capital, like a machine or draught animal. In the next article, I will explain that this modification leads to a *general theory of value*.

12. Towards a general theory of value

By divine mandate, stipulated in the tablets of the law, virtually all over the world people work for six days yet are paid for seven, which was maintained even during the worst moments of over-exploitation of work at the beginning of industrial capitalism. This is stipulated in Article 123 of the Mexican Constitution, which also establishes other days of compulsory rest and holidays. A significant proportion of those that work today do so for five days a week and receive a salary for seven. School teachers receive a salary for 12 months of the year although they only work 10. Public university professors also enjoy a sabbatical year (after six years of work) during which they do not work and receive their full salary. These are discontinuities in work imposed by religious or social traditions or by trade union and political achievements. At the same time, no-one works 24 hours a day, since the initial limit on a working day for any system of exploitation of another person's

work is a natural, biological limit: human beings, like any animal, need to rest. However, the body continues to expend energy even when it is resting (see Graph 9).³⁶ *Work is discontinuous but payment is continuous* in all the cases mentioned. But salaried workers in discontinuous work processes such as agriculture receive *discontinuous payment for their discontinuous work*, despite the fact that this discontinuity is imposed by nature: the biological process of plants, which creates a radical asymmetry.

Towards the end of the previous section I showed that introducing an additional equation into Marx's simple reproduction scheme to guarantee not only the reproduction of capital but also that of the labour force and also considering discontinuous labour processes apparently destroy Marx's theory of value. The solution to this problem involves considering that, in addition to incorporating live work and therefore value, *labour power also transfers to commodities the value of its labour power during the days when it does not work every year*. In this case, it does not create new value but when work starts up again, live labour transmits to the commodity being produced, not only the value of the livelihood consumed during working days but also of the means consumed during days without work. In other words, during the 100 days of annual work, the agricultural worker transfers the value of his and his family's livelihood for 365 days a year. By denoting the agricultural sector with A and separating the value of labour power into two parts, the number of days worked (V_{AL}) and the number of those not worked (V_{AR}), Marx's original expression for agriculture would be $W_A = C_A + V_{AL} + S_A$, but would now be $W_A + V_{AR} = C_A + (V_{AL} + V_{AR}) + S_A$. In other words, the capitalist pays additional wages V_{AR} , but sells the commodities produced at a value that has also been increased by V_{AR} . Surplus value (S_A) is not modified.

In areas with a continuous work process, V_{AR} is equal to zero and we are back to Marx's equations. The previous formula has therefore made it easier to shift from the theory of value for continuous work processes to a *general theory of value* valid for both continuous and discontinuous processes, in which the reproduction equations not only express the conditions of the reproduction of capital but also of labour power in a capitalist mode of production in which agriculture exists. One can infer from this that the only way for pure capitalism to prevail in agriculture is for capital to pay for the cost of reproduction of labour power for the entire year and transfer this additional cost to consumers.

Can we really think that the worker transfers the value of his means of subsistence to the commodities he produces, like a machine or the raw materials incorporated into the labour process? If the answer is affirmative, can we think that the value of consumption of several days without work can be transferred to the commodity when work begins again? In Section 9, I quoted the passage in which Marx sets out his theoretical explanation of the value of labour power (LP). There we found expressions such as: production and reproduction (or maintenance) of labour power; the value of labour power only represents a set amount of average socially necessary labour objectified in it; during the work process, a person uses up a set amount of human muscle, nerves and brain that must be replaced; the *continuous presence* of labour power is required in the market, which is why the sum of means of subsistence includes those necessary for the substitutes (children) of the mortal

³⁶ During sleep, our bodies operate at the Base Metabolic Rate (BMR). The daily expenditure of a "dependent, totally passive person" is equivalent to 1.27 times BMR, a value known as *survival forecast*, which represents approximately 60% of the energy expenditure of someone performing a high-intensity job and 80% of someone performing a low-intensity job.

worker. But can we speak of *production of labour power as a commodity*?³⁷ Even if we say yes, we cannot fail to note that whereas soaps are produced in capitalist factories as commodities for sale with the aim of obtaining profits, labour power, which cannot be separated from its bearers, human beings, is not produced for sale. Instead, human beings procreate other human beings as a similar social-biological process to that of other species. That is why continuing to speak of the *production of labour power* requires referring to the life process of individuals, to the satisfaction of needs, to couple formation and the procreation and rising of offspring. We have to be aware that *the production of LP is the other side of the consumption of means of subsistence*. In the famous *Introduction to the Grundrisse* (1857), Marx says:

“Consumption is also immediately production, just as in nature the consumption of the elements and chemical substances is the production of the plant. It is clear that in taking in food, for example, which is a form of consumption, the human being produces his own body. But this is also true of every kind of consumption which in one way or another produces human beings in some particular aspect. *Consumptive production*”. (*Grundrisse*. Penguin Books, pp. 90-91)

Marx takes up what he says here about use values and about the link between human beings and nature, in *Capital* as theory of the value of labour power, as social relations. It is thus understandable that he writes about the *production of the value of the labour power commodity*.

13. Subsidies and poverty in peasant economies

In the everyday reality of Latin American peasants (to speak of the reality less far away from my experience), the unequal labour requirements throughout the year in markets in which capitalist firms and peasants concur, force peasant producers to complement the income from their plots of land with off-farm income in order to be able to fulfil their mission of reproducing the labour force. In some cases, this off-farm income accounts for over 50% of their income (e.g. in the state of Puebla, Mexico, or the northwestern tableland of Guatemala).³⁸

The numerical importance of peasants in Latin America (the number of units nationwide tends to be hundreds of thousands and in some countries, millions) and their key role in production, particularly of basic foodstuffs, reflects the competitive structure of agricultural production. The deterioration of the terms of exchange between agriculture and urban sectors (national and international) contributes to (and exacerbates) a structural tendency towards extremely low agricultural relative prices in Latin America, compared with the prevailing ones in developed countries.

There seem to be three factors that explain the low relative prices of agricultural products in Latin America compared with those of the first world, both today and 20 or 30 years ago: 1) the low effective protection of agriculture –in relation to industry- during the prolonged period of industrial import substitution; 2) the abrupt trade liberalization of the 1980s and 1990s, has led to the mass import of subsidised agricultural products from rich countries,

³⁷ Karl Polanyi defines commodities as objects produced for sale on the market. He says that, “work, land and money are not obviously commodities. On work, he says that this is another name for the human activity that accompanies life itself and is produced for entirely different reasons.” *The Great Transformation*, 1944/2001, Beacon Press, Boston, p. 75.

³⁸ See Alain de Janvry, “El caso latinoamericano”, in *Campesinos y desarrollo en América Latina*, Tercer Mundo Editores, Bogotá, 1991 (cuadro 10).

which further depresses the general price level of agricultural products and 3) the fact—centrally analysed in this paper—that peasants assume the year-round cost of labour reproduction, being able to transfer to the prices of agricultural products only the labour cost of effectively worked days.

Regarding this last point, it seems obvious that, unlike Latin American peasants, family farmers in Europe, the United States and Japan (some of them might be called peasants), insofar as their respective governments protect their agriculture from outside competition and/or grant them large subsidies, obtain sufficient income from the value added of their agricultural units for the reproduction of their families all year round, without being obliged to sell their labour in a temporary, itinerant or undignified manner. This could be interpreted as the fact that the societies of these countries acknowledge family farmers' *right to a minimum standard of living without the need to degrade their status by temporarily hiring out their labour*. These conditions, given the resources and technology, can only be achieved if prices of their products are protected and/or subsidised, given the price setting logic in markets where the peasant (and family farm) economy concurs with capitalist firms, which only assume the cost of labour effectively used. *When this right is not acknowledged, as happens in all Third World countries, peasants are condemned to permanent poverty.*

A hypothetical numerical example might clarify the argument. Let us assume, for the sake of simplicity, that labour is used in maize production for a third of the days in a year (122). Let us also assume that it is the only crop and that both family and capitalist farmers use the same technology. The only difference is that capitalist units hire wage labour per day while family producers perform all tasks using family labour. Let us also assume that the salaries paid in agriculture are enough for the “satisfaction of the material and cultural needs of the worker and his family and enable him to pay for his children's education” (as the Mexican Constitution defines the minimum wages). In other words, that wages are equal to the poverty line for an average sized household. The cost of labour (by hectare) in the first case (where it is a fixed cost) would be three times higher than in capitalist agriculture. Since capitalist and family farmers coincide in the same market (let us first think of an absolutely closed market) the price is determined by the price the former are prepared to pay. Since the former only pay for the 122 days worked, they are prepared to sell the production of each hectare at 110 (40 of input costs, 60 of labour and 10 of profits)³⁹. So family farmers are also forced to sell at 110 as if their labour were a third (60 instead of 180 in labour, 40 in inputs and 10 in ‘profits’) rather than 220 (40 in cost of inputs and 180 in costs of maintaining labour). They would sell at half their total cost. If only family producers took part in the maize market, then production would be sold at 220 (with no profit, since this is unnecessary in family production), twice what they would obtain when they compete with capitalists. Since the poverty line is 180, by selling at 110, the family would be very poor. By selling at 220, the family would obtain a net income of 180 (discounting the 40 for inputs) and would be exactly on the poverty line. It would not be poor.

Through the above hypothetical example, I have shown that even if we eliminate (through assumptions) the other poverty factors of family farmers that are present in underdeveloped countries (while remaining within the framework of a closed economy): lower productivity

³⁹ These figures are in fictitious units. They are not pesos or thousands of pesos.

and profitability than their capitalist competitors and labour valuation below the cost of satisfaction of basic needs), *family farmers will continue to be poor in a market where price levels are determined by the operating logic of capitalist firms.*

Although the assumptions that eliminate the other factors of peasant (or farmers') poverty are false in countries from the 'south', they are not in most of Europe, Japan, Canada, New Zealand, Australia and the United States. They were not when the Common Agricultural Policy (CAP) of the then European Common Market (now the European Union) was implemented.

The enormous agricultural subsidies of the first world, which some have calculated at \$360 billion USD annually, manage to prevent (most of) the poverty into which family farmers would be plunged without them. This poverty would not come from their low productivity or from the undervaluation of the work in their societies but solely from the seasonality of the productive process in agriculture. Without subsidies, European or Japanese peasants (and even American farmers) would have to seek off-farm work in cities or abroad, for many months of the year, to complete their income. They would experience the itinerant poverty of Third World peasants.

This is one of the goals that CAP sought to achieve. According to the Buckwell Report (available for consultation in the European Union's electronic portal), nowadays, in most EU countries, agricultural producers' incomes *are on a par with the average income of urban households.*

Pressure in the EU to reduce subsidies has mobilised peasant resistance. From the analysed perspective, agricultural subsidies in developed countries will not fall because these societies have acknowledged the right of their family farmers to live decently, as evinced by the American farm bill which was in force during the period 2002-2008. Thus, with a series of enormous technological and financial obstacles to face competition, peasants in Third World countries also face large differences in the support and subsidies they receive from their respective governments *vis à vis* farmers in the First World. It is worth taking a little space to examine The Farm Security and Rural Investment Act (Onwards Farm Security Act), passed by US Congress in 2002, which replaced the Fair Act, which was in force from 1996 to 2002, had a validity of six years, which expired in 2008.⁴⁰ These laws in the US are in fact multi-annual budget assignment mechanisms. This Act established subsidy programs for specific products, international trade and conservation programs among others. The subsidy program includes a 70% to 80% increase over the previous one.

The central component of this Act is anti-cyclical, meaning that American farmers will be compensated for market fluctuations, so that they will continue to receive high prices although prices may have slumped, which may lead to over-production. The International consensus on farm subsidies, which led Mexico to eliminate prices to guarantee farm products, is to eliminate subsidies that create incentives for over-production. A European Union electronic portal therefore points out that: "By subsidising farmers in a way that highly distorts production, the US Farm Bill has made the EU lose all credibility in the WTO negotiations.

⁴⁰ This law was replaced in June 2008 by the *Food, Conservation, and Energy Act of 2008* also known as the *2008 U.S. Farm Bill*, a law that will be in force for 5 years, until 2013. The law includes new issues but maintains the logic of agricultural subsidies of the previous law.

The Act includes three types of subsidies: 1. *Fixed payments* per farmer for each eligible crop. Soybean and certain oilseeds were added. Payments are higher than under the previous act. 2. *Compensation payments* when the market price is lower than a price set by government. They are called loan rates, apparently because prices are set when the farm receives credits to sow crops. This counter-cyclical subsidy already existed in the previous Act but was increased by approximately 5% and a few pulses not previously contemplated were added. 3. *New Countercyclical Subsidies* These subsidies are paid when farmers' total income (the sum of what they have obtained through the market plus the two previous subsidies, fails to achieve a predetermined level). Although the previous Act did not have a similar stipulation, the US government had introduced emergency packages in this respect in response to the drop in prices since 1998.

What is wrong with countercyclical subsidies? asks the European Union's electronic bulletin. First of all, it answers with a crucial statement in terms of the theory outlined here:

"These payments guarantee the American farmer a certain level of income. As its income is now guaranteed, the farmer does not need to follow the market signals, particularly in times of low prices. As guaranteed income means guaranteed profitability in almost every crop, farmers will expand production in marginal lands without worrying if the crop will find a market at a good price. The additional production will flood the market and prices will be further reduced (while income will be protected by growing subsidies of types 2 and 3). This is why the most important American commentators describe this policy as ultimately self-destructive"

On US farm exports, the bulletin states: "United States exports 25% of its agricultural production and in some crops, like wheat, up to 40%. Subsidies 2 and 3 will make those exports cheaper. As domestic prices decrease, the American market ceases to be attractive, particularly for the producers of developing countries, regardless of the advantages they might have".

With NAFTA that allows the US to export to Mexico as though it were in its own country, with no tariffs, exports to Mexico can obviously increase enormously without farmers worrying about the price at which they are sold. They can sell at the same price as in the US. Of all the developing countries, Mexico is the most severely affected. In short, this Act means that Mexico's US farm imports would increase while its exports to this country would decrease. It could potentially lead to the bankruptcy of many small, medium and large productive units. This would occur simply as a result of the play of market forces. However, the Act increases financing for programs for the creation, expansion and maintenance of overseas markets for US farm products. The export credits and subsidy program for exports remain. The OECD has identified these subsidies as the source of 97% of the world's farm subsidies and they have been condemned by the WTO as an illegal subsidy, which has obviously not prevented its continued practice.

In Mexico (and elsewhere in the Third World), peasant families live in abject poverty because: 1. their productivity levels are far below those of their competitors: Mexico's capitalist producers and US and Canadian producers; 2. because labour power is undervalued in the country, particularly in rural settings and 3. because the cost of seasonality is paid almost exclusively by peasants. In order to overcome the poverty of family farmers, these three disadvantage factors must be reversed. The productivity disadvantage can be offset through a combination of trade protection measures and the promotion of technological development. Manuel Díaz points out (personal communication) that there is virtually no applied research on agricultural practices in Latin

America, and that “we only buy and misuse what is done in other countries.” This was not the case in Mexico in the 1960s and 1970s. Whereas at that time we had a growing development of agricultural research and agricultural advisory service (extensionism) and a protected agricultural market, conditions have been reversed in both areas.

The three central factors explaining the undervaluation of labour in Mexico are: 1) the forces of globalization that have reduced trade unions’ coverage and power; 2) wage repression policy, which uses wages as an anchor for inflation; and 3) the slow growth of the economy and jobs in the modern economy. It is possible to implement significant changes that would reverse the tendencies of these three factors: a new wage policy, a reform of the Federal Labour law to strengthen independent trade unionism, and an economic policy to encourage economic growth instead of the current one, obsessed as it is with inflation control.

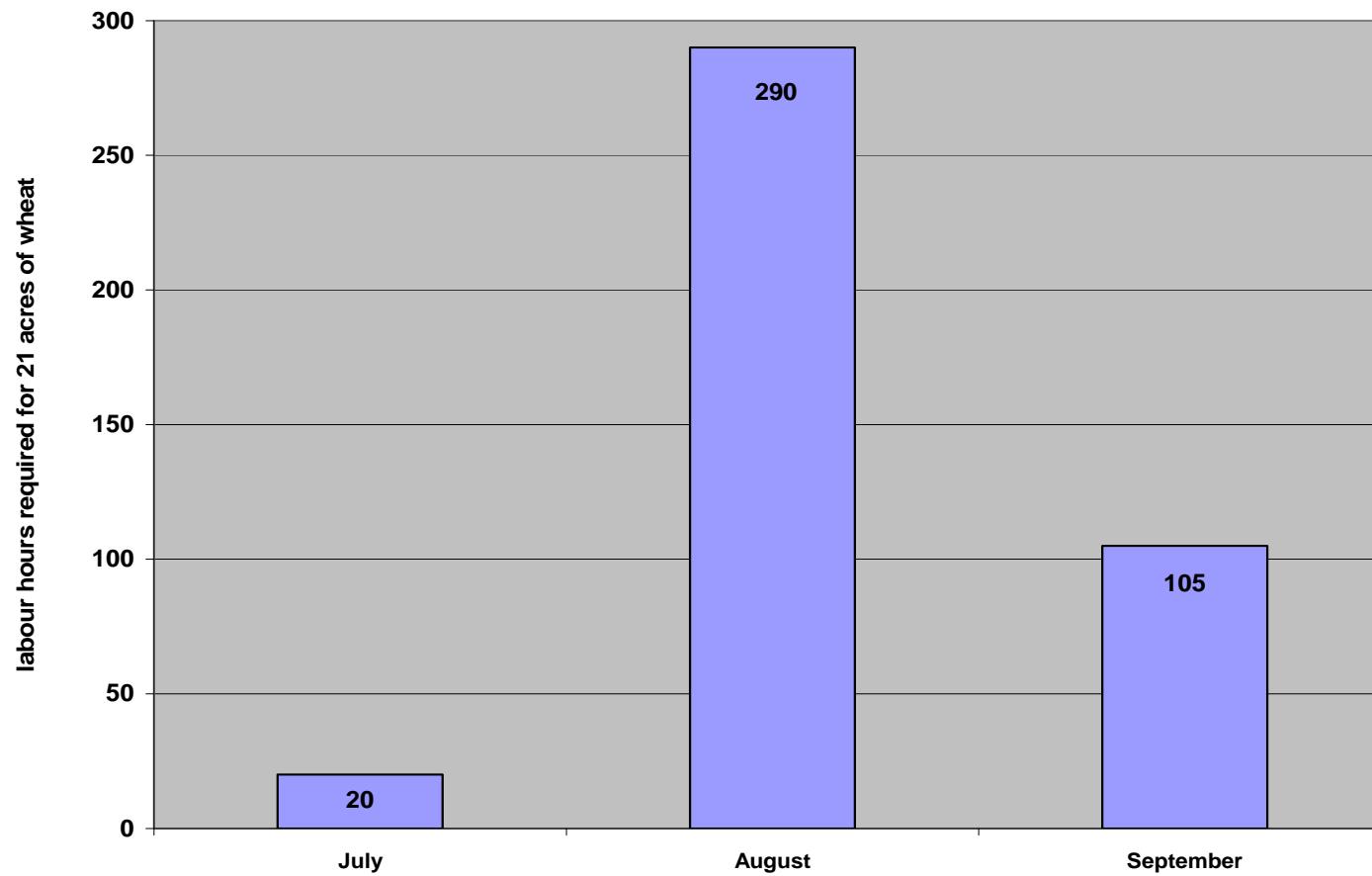
Lastly, farmers must be subsidised and/or protected from external competition. In order to prevent many subsidy resources from boosting the income of the most privileged farmers, family farmers must receive the total amount of subsidies designed to offset the cost of seasonality. Conversely, capitalist farmers would only require subsidies (which would be common to all producers) to deal with the asymmetry of international competition. Subsidies and trade protection must be complementary. The less protection there is, the more subsidies are required.

In a unified world market (which does not actually exist) without protectionist systems or subsidies, agricultural prices (and those of the inputs and machinery) will be the same worldwide, while peasant farmers' income would be a function of the product generated. Income differences between peasants in the First and Third World would only be equal to the differences in productivity per man employed. However, the theory outlined here predicts —which would have to be empirically proved— that income differences are much greater due to the fact that whereas the economic policy of the *First World leads society as a whole to assume the cost of the seasonality of farm labour, that of the Third World continues to insist that this cost must be assumed by peasants only, thereby keeping them in poverty*.

The correct policy for third world countries, if they wish to substantially reduce rural poverty, is therefore not to combat the agricultural subsidies of First World countries but also to subsidise their peasants and protect them from low foreign prices.

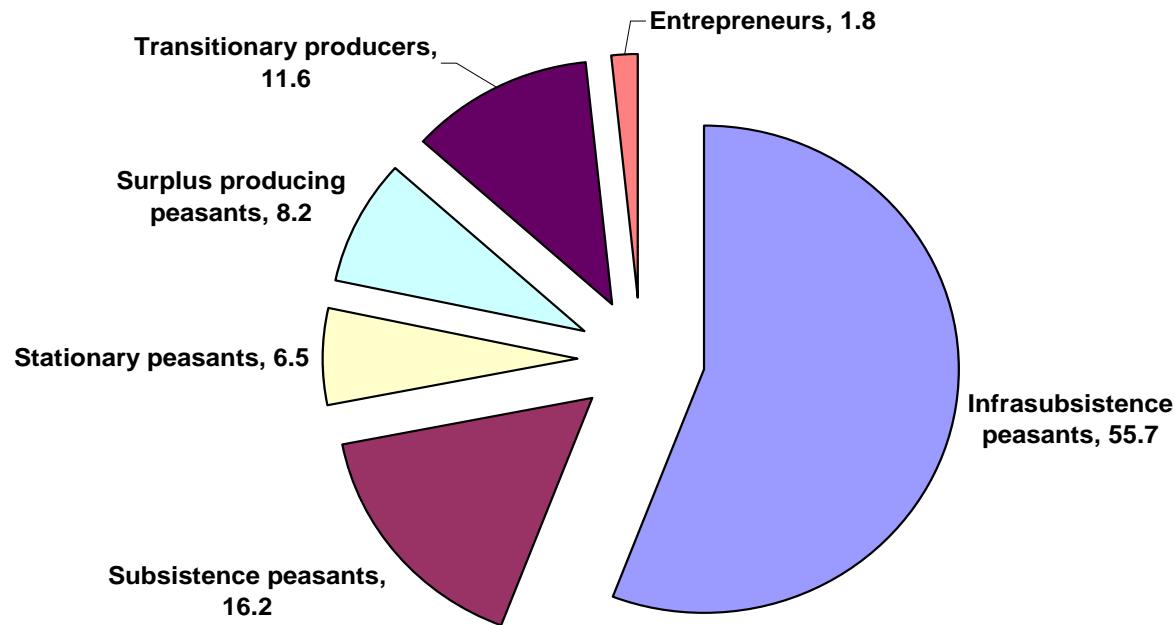
Graphs

Graph 1. Seasonality of labour requirements in agriculture. Winter Wheat, USA, 1913



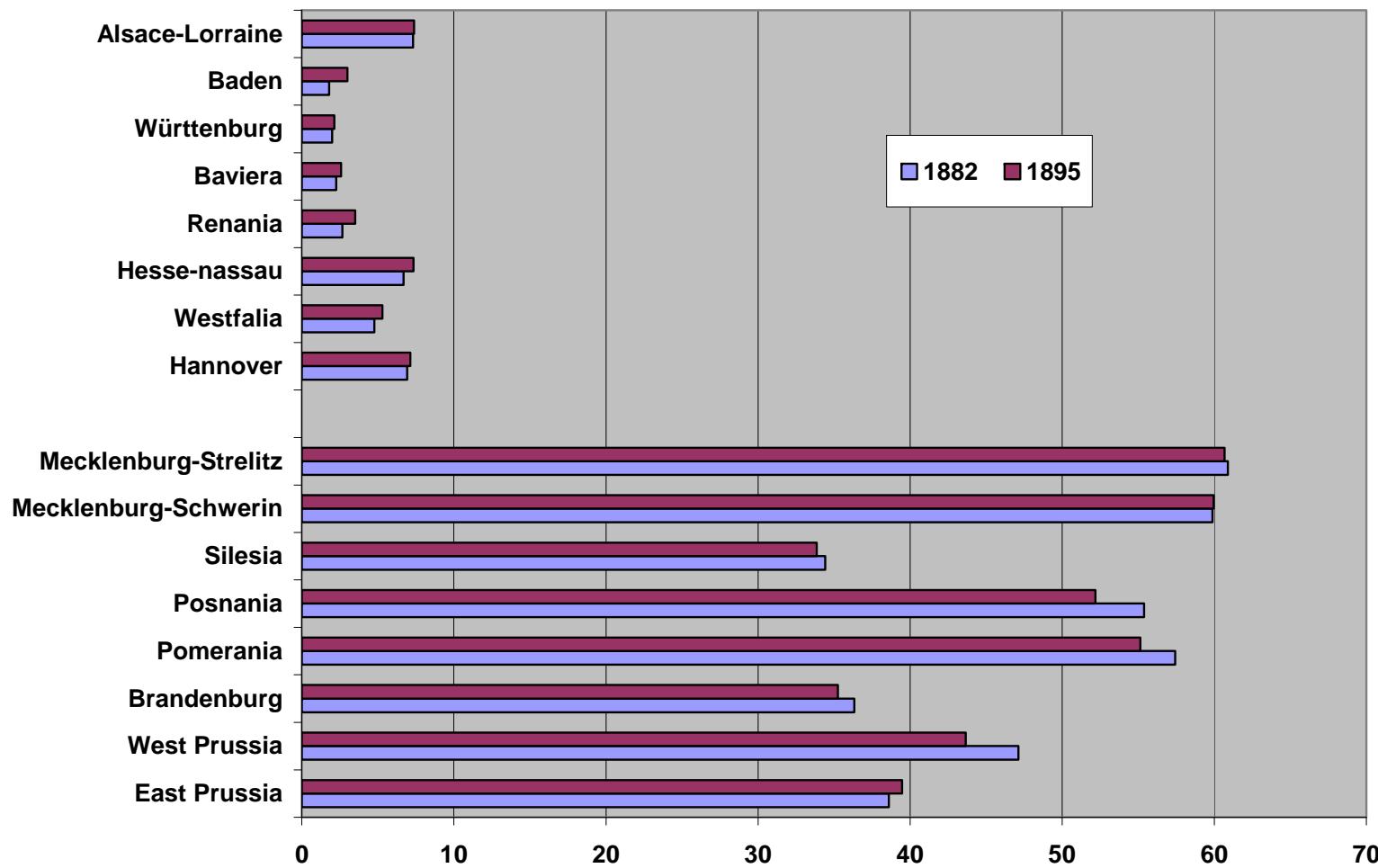
Source: Based on Figure 3-1, S.A. Mann, *Agrarian Capitalism in Theory and Practice*, University of North Carolina Press, Chapel Hill, 1990, p. 59. Note: in the rest of the months labour requirements are nill.

Graph 2. Typology of agricultural producers in Mexico, 1970 (% of the total)

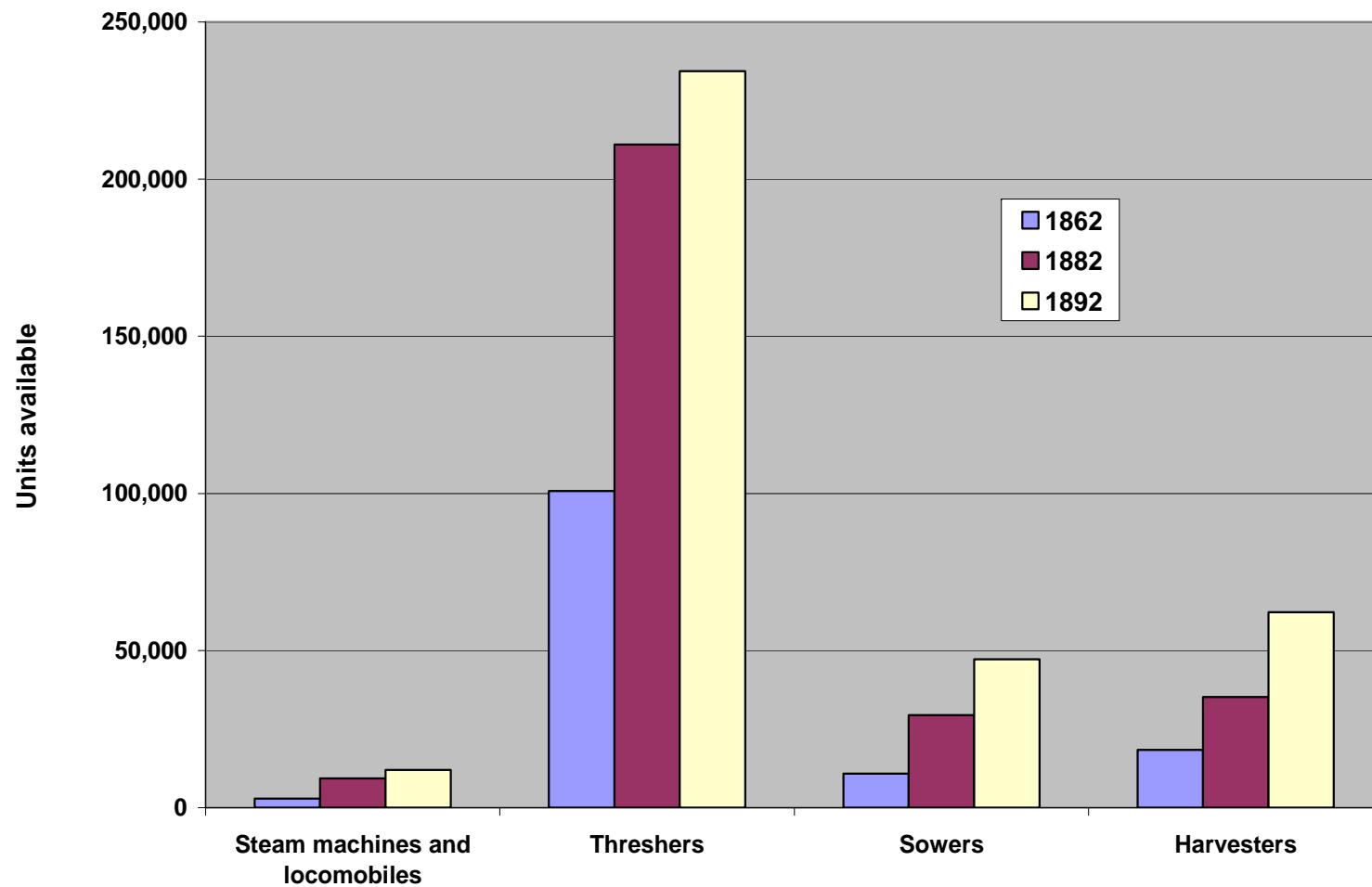


Source: Table 2, Chapter IV in Cepal, *Economía campesina y agricultura empresarial. Tipología de productores del agro mexicano*, Siglo XXI editores, México, 1982, p.114. .

Graph 3. % of land in units of 100 hectares or more. Germany 1882 and 1895. Areas of prevailing small holdings (upper part) and prevailing large holdngs (lower part of graph).

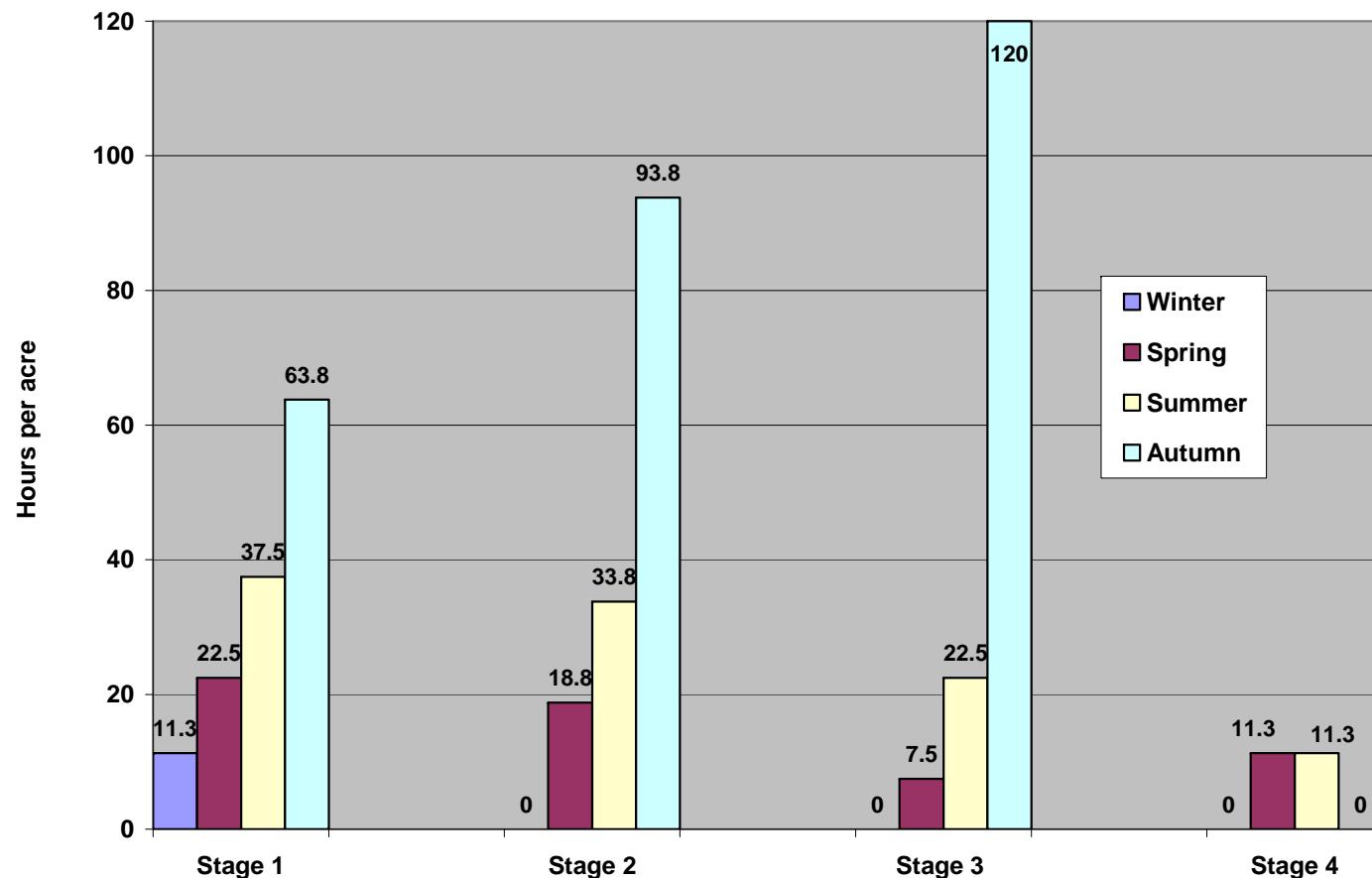


Graph 4. Agricultural machinery available in France, 1862, 1882 and 1892



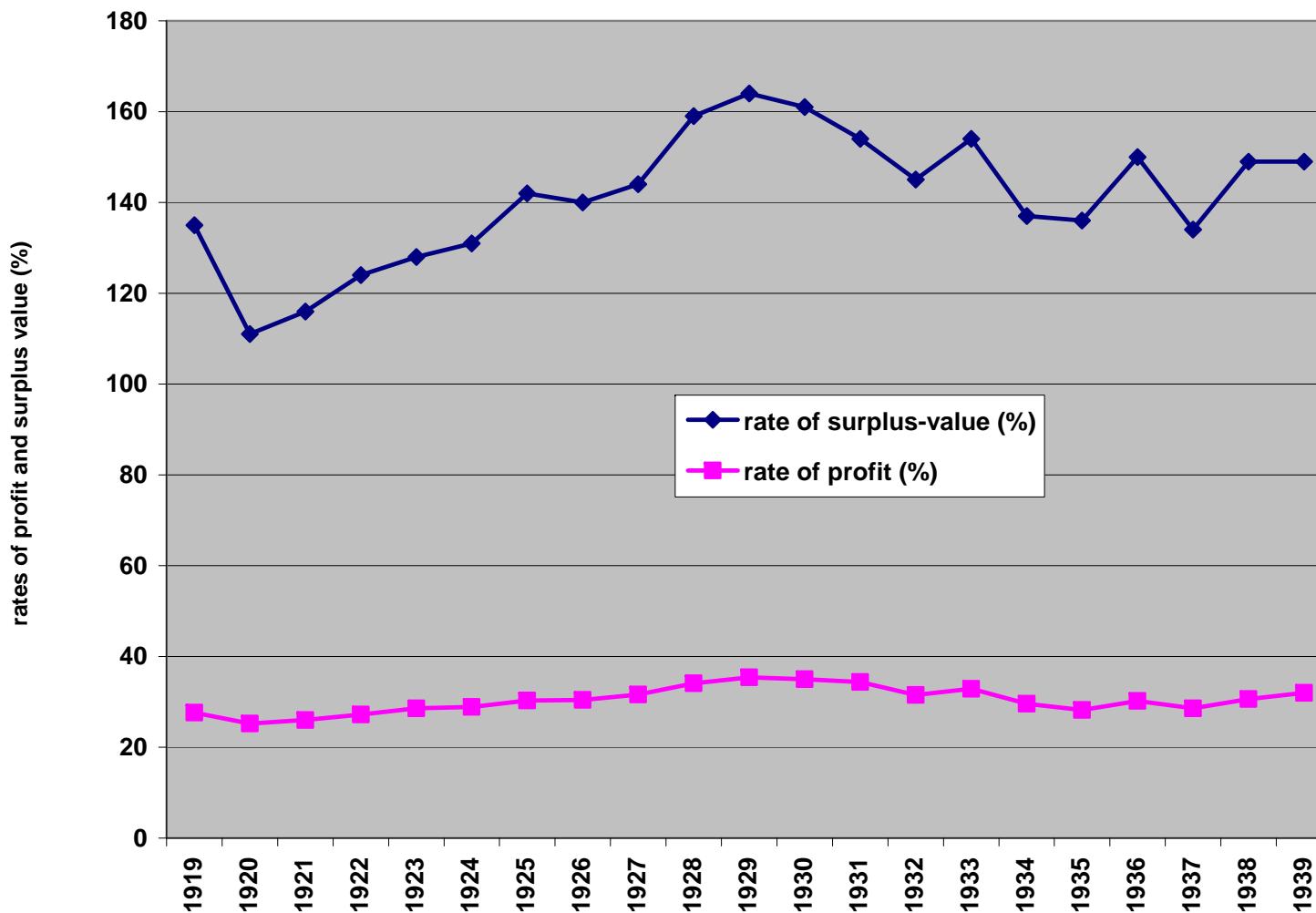
Source: Based on table on Page 46 of Karl Kautsky, *La Cuestión Agraria*, Ediciones de cultura Popular, México, 1974

**Graph 5. Cotton. Non-qualified labour requirements (hours per acre)
by technological stage and season. Missisipi Delta**



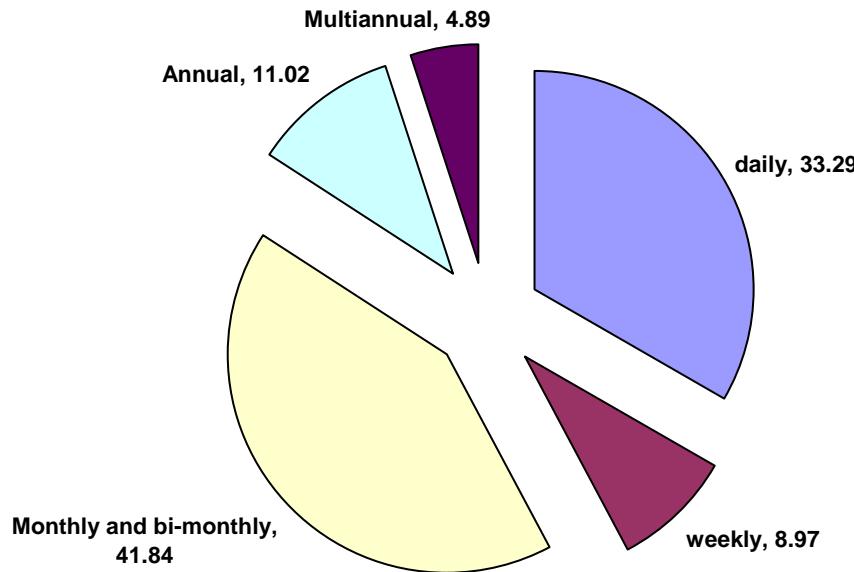
Source Based on Figure 5.2, p. 108 of S.A.Mann, *op.cit.*, p.108. Note: Stage 1: labour-intensive technology and mule traction; stage 2: introduction of tractors; stage 3, introduction of multi furrow sowing machines; stage 4 : introduction of harvesting machines.

**Graph 6. Rates of surplus-value and rates of profit
in USA manufacturing industry, 1919-1939.**



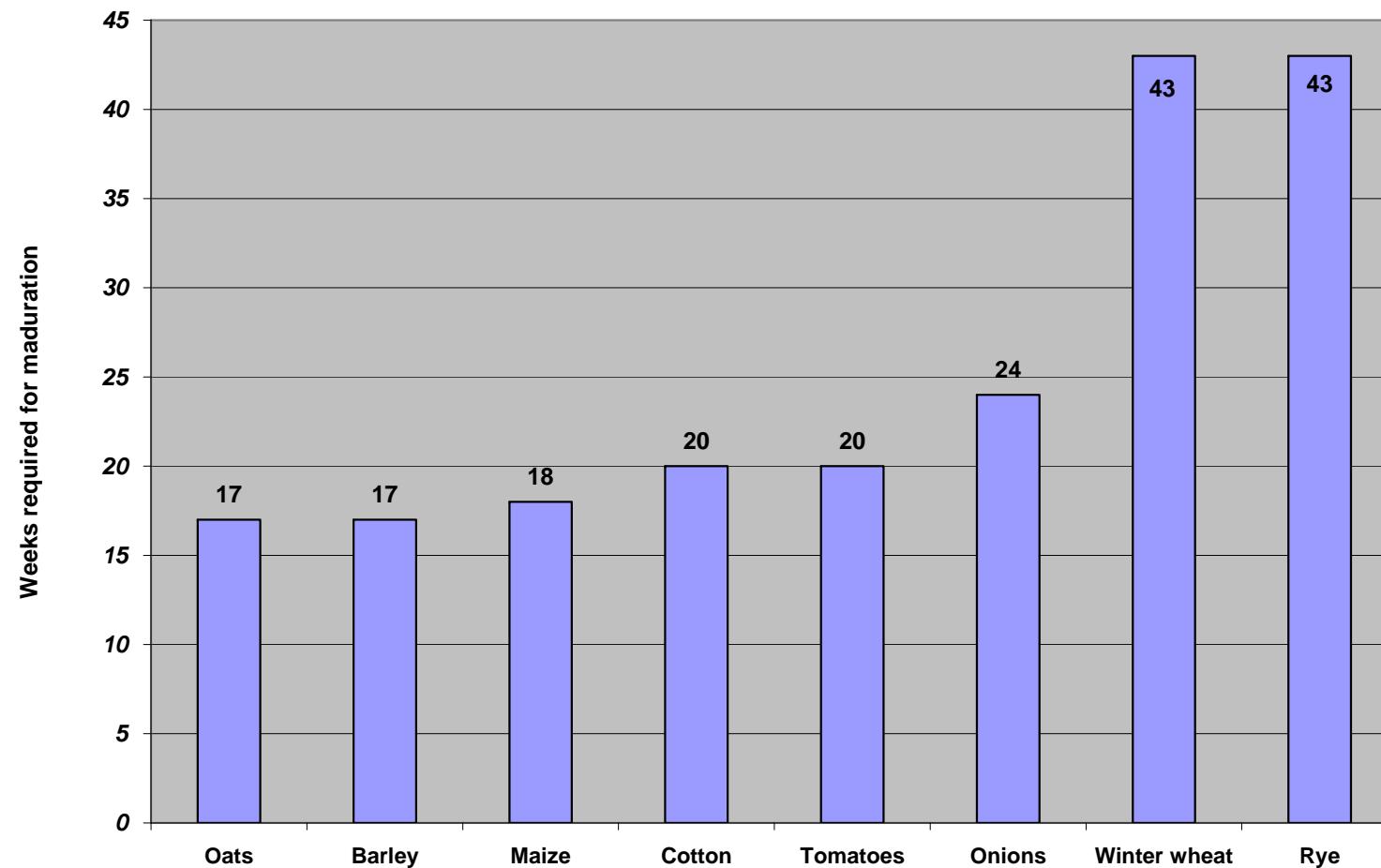
Source. Based on Appendix 2 (p.47) of Joseph M. Gillman, *The Falling Rate of Profit*, Dennis Dobson, London, 1957.

**Distribution (in %) of the cost of family normative budget in Mexico
by frequency of the expenditure**



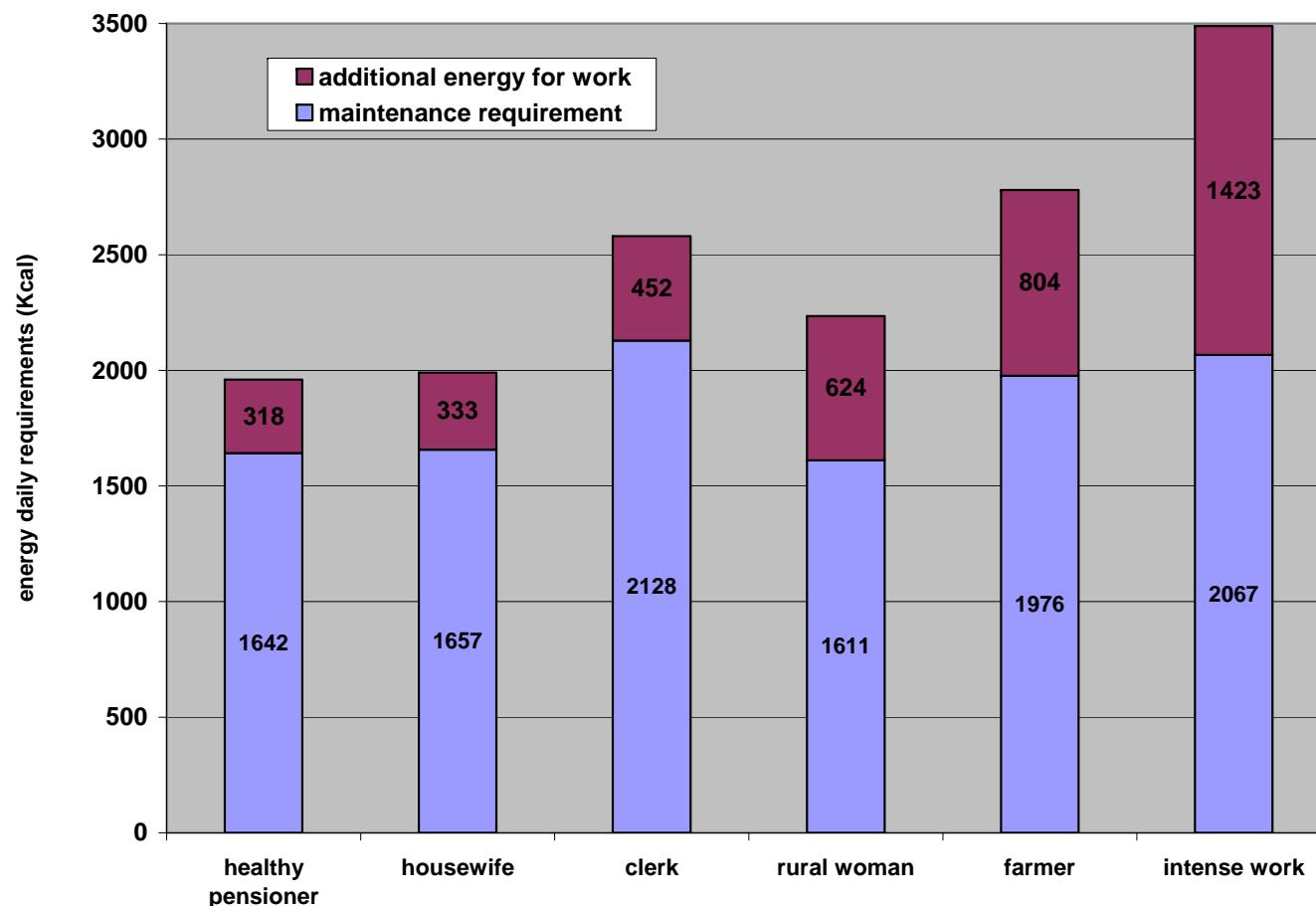
Source: Based on the modified Normative Basket of Essential Satisfiers of Coplamar, Mexico. The modifications were made by Alejandro Marín in his unpublished B.A. Thesis. Values are for the year 2000. Note: expenditure in housing was classified as monthly frequency.

Graph 8. Maturation time (in weeks) of different crops. Southern States, USA, 1901



Source: Based on Table 3-8 of Susan A. Mann, *Agrarian Capitalism*, *op. cit.* p. 57

Graph 9. Maintenance requirement and additional energy for work (in Kcal).



Source: Based on table 14.1, Julio Boltvinik, *Ampliar la mirada. Un nuevo enfoque de la pobreza y el florecimiento humano*, Unpublished Ph. D. Thesis, p. 73, vol. II. Note: maintenance requirement is the energy requirement of a totally dependent and passive person.