

# 1 | POVERTY AND PERSISTENCE OF THE PEASANTRY: BACKGROUND PAPER<sup>1</sup>

*Julio Boltvinik*

## 1. Introduction: agricultural capitalism needs peasants

We know that most of the world's rural inhabitants are poor.<sup>2</sup> 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 and technology, which translate into low production levels and therefore low income, and/or the fact that peasants are subject to various forms of exploitation (surplus extraction).<sup>3</sup> However, these conventional explanations 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 income from other sources' (Mann 1990: 142, emphasis added). Moreover, these peasants and poor farmers have defied predictions from writers of both the left and the right that they would disappear off the face of the earth:

The classical conception of the development of capitalism in agriculture is that, as in industry, the agrarian class-structure will tend to polarise; the petty commodity producer will tend to disappear: *a capitalist relation of production will develop ... the agrarian future would be one of big estates, managed by capitalist farmers ... 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 [European Economic Community] in 1966–7, for example, only 14 percent of the labour force was 'non-family'. In the US the percentage

of hired labour to total farm employment has fluctuated around 25 percent since 1910 ... the modern rural proletariat is largely part-time ... drawn into agriculture during certain peak-periods ... The group of full-time agricultural labourers is surprisingly small. (Djurfeldt 1982: 139)

These are two of the issues I propose to deal with in this paper on poverty and the survival of family units: two phenomena that raise fundamental conceptual and practical challenges. To this end, I will review the appropriate international bibliography.

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

During a 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 persistence of the peasantry, which led me to the 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 and harvesting 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 is obliged to sell his labour seasonally (and is willing to sell it cheaply) *only if he is poor*: rich farmers in the USA can (and do) spend the periods when there is no farm work in idleness. In other words, *agricultural capitalism can only exist in symbiosis with poor peasants who are ready to (and urged to) sell their labour some days a year.*

A theory that explains peasant survival must also explain their poverty. This is, however, asymmetrical: although agricultural

capitalist firms could not thrive without peasants, the latter would be much better off without agricultural capitalists. This is because, as mentioned, when capitalist firms are present in the market, farm product prices reflect only the costs of labour power effectively paid for. For capital, labour power is a *variable cost*: it pays only for the days it hires the labour force. Conversely, for the peasant family economy, it is a *fixed cost*: it always has to provide for the reproduction of the whole family. 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 families), agricultural prices would reflect the year-round cost of the reproduction of labour power and would therefore be much higher than current prices. 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 is such that the majority are incapable of properly answering the question about the essential economic differences between agriculture and industry (agricultural economists are the exception). One must begin by pointing out that agriculture works with living material: agricultural production basically consists in *taking care of and stimulating the natural biological process of plant growth*. By contrast, in industry the objects in the work process are (mostly) 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 and must be carried out where the plant is. In other words, the biological process imposes both temporal and spatial rules on man's activities. Conversely, in industry, where one works (mostly) with fibres, metals, wood, plastics or harvested grains, the work process is not constrained either spatially or temporally. The speed of the process (except for some chemical reactions) and the place in which it is carried out are dictated by man.

These differences can be summarised as follows. Firstly, whereas in industry processes can be *continuous* (24 hours a day, 365 days a year), in agriculture they are *seasonal* (for example, the harvest is concentrated in a few weeks of the year). Secondly, whereas in

industry all the production activities 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*. Thirdly, whereas in industry the material is usually transferred to the operator or the machine, in agriculture the operator or the machine must move to the place where the plant<sup>4</sup> is.

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 variability of rainfall in zones without irrigation systems, the presence of pests and so on determine the risk of partial or total crop loss. The risks of industrial production loss are lower and, except for disasters, 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 results 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 peasantry<sup>5</sup>

Leaving aside the question of whether the peasant economy constitutes a specific mode of production, the concept is applicable to smallholders who work individual plots of land as their principal source of income, based mainly on family work; however, it can also be applied to communities where certain activities are carried out collectively. Here, I follow Chayanov (1966), for whom 'peasant family farm work' or the 'family farm' is characterised by being based solely on family work and not employing wage labour.

It is unclear whether the concept of the peasantry should or should not include those smallholders whose main income comes from the sale of their labour force, while income derived from the plot complements this. Empirically, at least in Mexico, this is a very important group (on this, see R. Bartra 1974: 30).

Some features of *peasant family units* are as follows:

- The peasant unit is an organic structure, so changes in one of its elements affect the rest. Activities are interdependent because they compete for the same resources – sometimes the by-products of one activity serve as inputs for another – and due to competitiveness or biological complementarities.
- Unlike a capitalist firm, which is exclusively a production unit, the peasant family is both a production and a consumption unit. The dominant pole determining the objectives of the unit is the set of family needs, or the family as a consumer unit. For most of the world's peasants, the main objective is survival. Decisions about what to grow and with what intensity 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 age/sex composition of family members.
- Family security plays an essential role in any decision. The consequences of crop failure for a poor family go beyond financial difficulties. The larger the cash transactions, the greater the risks, so, for the same level of income and work, peasants prefer alternatives that involve a lower volume of monetary transactions.
- Peasant units are subject to various restrictions simultaneously: on land and on 'capital', as well as on peak seasonal labour. Since the resource endowment varies from unit to unit, the valuation of resources (their 'shadow price') also differs. Likewise, this valuation will vary within each unit according to the mixture of crops sown.
- Many cultivation practices, such as mixed crops and sowing distributed over time, are different from those of modern agriculture and little known in farming sciences.<sup>6</sup>
- The family goal, maximising well-being, is achieved through a flexible process that allows reviews and requires frequent decisions.

Even though there is no single theory on peasant behaviour, it is generally accepted that it 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. In 'On non-capitalist modes of production' (1996: 25), Chayanov attempted to define the economic categories applicable to a broad range of modes of production.

In any case, both Chayanov's theory and the discussions of those who 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.

#### 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 seasonal supply), labour requirements are, 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 following question: *Who pays for the cost of reproduction of the agricultural worker – and his family – 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 within 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 mechanisation, '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 mechanisation as before. Why? (Brewster 1970 [1950]: 3, emphasis in original)

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:

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'*. (ibid.: 5)

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 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. (ibid.: 5–6, emphasis added)

The large agricultural units of the Latin American past, such as Mexican haciendas, solved the problem of maintaining the labour force during periods of unemployment intelligently – given their interests – by giving the peasant the right to work a plot of land for his family's consumption. This is a similar solution to that of feudal systems and sharecropping: by giving families the right to work the land, the landlords transfer to the peasant families the seasonal problem of agriculture, freeing the feudal lord or boss from the commitment to maintain the labour force all year.

In capitalist agriculture, the seasonal wage earner has to assume the responsibility of maintaining himself or herself (and their family) during periods of unemployment. *Price setting in capitalist agriculture is therefore determined only by the labour costs of days that have been effectively worked and paid for. Insofar as the family producer – whether he is 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 pay only for the days that have been effectively*

worked. However, the family has to assume responsibility for the year-round maintenance of its members.

Given that the predominance of capitalism is not only economic but cultural, in a capitalist economy with a significant presence of capitalist firms in agriculture, peasant producers themselves will accept the capitalist way of calculating costs and will include only effectively worked days in their labour costs, rather than their year-round cost of reproduction. One way in which this cultural imposition occurs is through bank credit. Banks (public or private) will calculate crop costs in the same way for peasant as for capitalist units. This acceptance of the cultural imposition of the capitalist production mode explains why peasants are willing to produce and sell their products if they recover the costs of inputs and effectively worked time. *In effect, they internalise one of the factors of their own poverty.*

On the basis of the dominant paradigm, authors from the left and from the right have forecast the generalisation of the capitalist economy in agriculture: that is, 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? In 1912, Luis Cabrera said, on the subject of providing communities with *ejidos*,<sup>7</sup> that this would enable medium and large estates to have access to cheap, widely available labour power. Hence, he regarded capitalist agricultural firms and peasant family units as complementary.

Unlike these forms of production that transfer 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 has to be done, in any productive form, with working animals. This must have reduced the slave economy's competitive capacity vis-à-vis the capitalist economy, which, as we have seen, pays only for days that have been worked. As the slave economy obtained adult slaves cheaply, this disadvantage was offset by the elimination of intergenerational reproduction costs. But, as 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. ... 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 capitalised slave rent. (Chayanov 1966: 15–16)

Apparently, the only productive forms that assume the costs of reproducing the agricultural labour force year round are primitive communities, slavery and peasant units (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 the capitalist system imposes on agriculture*, with peasants having to seek employment as seasonal wage workers off their plot of land to complement their income. The human cost of this is extremely high – *separation from the family, often sub-human living conditions, and so on – 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, profits and rents, as occurs in the capitalist economy.

Whether a family agricultural unit can live adequately from 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, African or Asian peasant.

To grasp the effects of the second and third differences between agriculture and industry (sequentiality versus simultaneity, and moveable material versus non-moveable material), I will follow Brewster's analysis of the different consequences of mechanisation in both:

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 process ... 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 mechanisation 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 mechanisation 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. (Brewster 1970 [1950]: 3-5)

Brewster also compares four associated consequences of mechanisation in agriculture and industry:

First, such advance accelerates the functional and task forms of specialisation in industry but not in agriculture. In working simultaneously, manufacturing machines so multiply the number of 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 labour operations ... For the absence of the functional and task forms of specialisation in industry would cause the worker to waste time in *going* from one operation to another, while any marked degree of task specialisation 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 specialisation. Second ... The relationship that once prevailed in [agriculture and industry] 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 ... Third, the machine ... [has left] 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. ... 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 likewise leaves the farmer in possession of the old artisan's creative satisfactions ... 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.: 7-9)

The differences in the nature of the material (moveable or non-moveable) mean that, in agriculture, machines must be moved to the

ground and plants; this contrasts 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 unit, the higher the costs of moving the machinery to where it is needed. This limit means, among other things, that there are different market structures in agriculture and industry. As Brewster points out:

The simultaneous pattern of operation makes possible such an expanded scale of production that the efficient utilisation 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. ... the guarantee of impersonal competitive forces, that the businessman will actually operate industry in line with the public interest, disappears ... Shift to machine methods has neither added to nor detracted from the primitive competitive character of American agriculture. (ibid.: 10-11)

The highly perishable nature of certain agricultural products is reflected in seasonal price variations; again, this contrasts 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 into account. Insofar as processes are not continuous, *neither is the production flow*. In general, the year's production can be concentrated into a few weeks. Unlike the industrial producer, the farmer cannot regulate his production flow on a daily basis. Whereas the former can adjust his production almost daily to the signs of the market, when the farmer makes the decision to sow – which, in principle, determines his volume of production several months later – he has to base this on his expectations of what the market situation will be at harvest.

One could say that, apart from the uncertainty (associated with natural risks) that characterises agriculture but not industry, there is another important difference: business risk in industry is concentrated in investment in *fixed* capital, whereas, in agriculture, risk is concentrated in investment in *circulating* capital (seeds, inputs, labour), and this investment must be made largely at the beginning of 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 in the cycle before that.<sup>8</sup>

### 5. The debate on the persistence of peasantry

Frank Ellis identifies in Marxist theoretical work two opposite lines of reasoning regarding ‘the persistence of peasant forms of production within the dominant mode of capitalist production’. On the one hand, there is the classic Marxist position put forward by V. I. Lenin (1967 [1899]):

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 ... include such factors as ... differential adoption of improved cultivation practices by different individual farmers, the enforced abandonment of their holdings by peasants unable to compete in the market ... the foreclosure by creditors on farmers who have run into debt, and the increasing employment of wage labour by those farmers who are successful. (Ellis 1988: 51–2)

The opposite line of reasoning, says Ellis, is that the internal logic of family agricultural production enables it to withstand the pressure of capitalist production relations and reproduce itself indefinitely. This might be due to: 1) peasants’ capacity, given their control over land, to provide for their needs for simple reproduction; 2) the social norms of peasant communities focusing on reciprocity rather than on the individual maximisation of profits (the ‘moral economy’ argument set out by James C. Scott); 3) demographic factors opposed to land concentration, given its subdivision in inheritance; 4) peasants’ capacity to overcome the pressure of the market, by increasing the amount of work invested in production (peasants’ self-exploitation); 5) 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, and supervision difficulties); and 6) the functional advantages for capitalism of leaving agriculture in peasants' hands (cheaper foods, less risk, for example), linked to reasons 4 and 5 (ibid.: 52).

The model by the famous Russian populist Chayanov is one of the non-Marxist theories within this line of reasoning. Chayanov explains the absence of unequal accumulation among peasants, according to Ellis's account, by the fact that their motivation does not include accumulation, but 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 that are consistent with the logic of capitalism and the market. Firstly, non-accumulation in the peasant economy may occur not as a result of a lack of motivation among peasants, but because capitalist production relations continuously force peasants towards simple reproduction through the *capture* (through various mechanisms) of *any surplus value created* and by the devaluation of peasant work resulting from innovations that reduce the price of agricultural goods. Both factors can be described, following Henry Bernstein, as a 'squeeze towards simple reproduction' imposed by the market 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.* (ibid.: 53–4<sup>9</sup>)

Vergopoulos's conception of the family agricultural unit and its relations with capital is full of insights:

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

who 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. (Vergopoulos 1978)

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 units that are unsuitable for supporting the families that operate them. The same phenomenon happens in Mexico, where, in 1970, so-called *infra-subsistence peasants*, who are equivalent to Harriss's marginalised units, represented almost two-thirds of all peasant productive units, according to Cepal (1982: 113). Harriss (1982: 120) adds that these marginal units can continue existing and that they provide the basis for the deep entrenchment of commercial and usury capital. The reader should note that, in defining marginal units without explaining why they exist, Harriss begs the question on the persistence of the peasantry. Precisely because of this, I hold that poverty and the persistence of the peasantry must be explained together.

## 6. Djurfeldt's virtual debate with Kautsky

Djurfeldt (1982) claims 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. However, it is unlikely that Marx sustained this unfulfilled prediction (see Kautsky's quote from Marx 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. However, Djurfeldt argues that, since

the late nineteenth century, large farms have become less important while medium-sized farms have increased in importance and small ones have been fragmented. To this, Djurfeldt adds another, very important, trend:

there is a tendency for the big *latifundistas* 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 1892 ... *it is a way of decreasing the cost of labour in a capitalistic enterprise, 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-power* (the value of labour-power is equal to its cost of reproduction) ... 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 *latifundistas*. (ibid.: 141–2)<sup>10</sup>

This superb paragraph shows that *pure capitalism is impossible in agriculture* and that the seasonal nature of agricultural work is the implicit guiding thread of Djurfeldt's argument. He also shows how *capitalism needs poor peasants* to perform the function of suppliers of *cheap*, and one should add *seasonal*, labour power. Here, he would seem to coincide with the thesis I put forward above: *agricultural capitalism can exist only in symbiosis with poor peasants, ready to (and urged to) sell their labour some days a year.* However, arguing with Kautsky (who said that the problem for large farms is the shortage of labour), he states that the '*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*' (ibid.: 142), which he attributes to the crisis in European agriculture unleashed by competition in the international grain market.

Let's examine some of Kautsky's statements in *The Agrarian Question* (1988 [1899]: 159–64), where he indeed (but implicitly) states that peasantry is an integral part of the capitalist mode of production in agriculture, albeit for demographic reasons:



The extension of the market, access to money, the necessary technical prerequisites – these in themselves are not enough for the creation of a large-scale capitalist enterprise: The most important thing is the *workers* ... In the older established nations, urban industry is not subject to any shortage of labour. *The proletariat multiplies*, and provides plentiful fresh labour-power for growing capital ... matters are quite different when we turn to agriculture. Working conditions in the towns render workers unfit for agricultural labour ... Under present day conditions, agriculture cannot supplement its labour supply from the urban, industrial proletariat. The problem for agriculture is that *the large agricultural enterprise is also unable to produce and retain the supply of wage-labourers it needs* ... Agriculture is still tied to the household. *No farm exists without a corresponding household. And there is no permanent household in the country without some form of agriculture* ... [In the countryside] a totally propertyless wage labourer, living in his own household, is a rarity ... Others with their own household are also usually independent farmers, on their own or rented land, *devoting only part of their time to wage-labour and the rest to working their own land* ... Such conditions *do not favour the reproduction of a class of rural propertyless workers*. House servants usually have no chance of marriage and the establishment of an independent household ... Conditions among the *Einlieger*, free day-labourers lacking their own household, are no more conducive to the raising of a new generation. *The best conditions for bringing up a plentiful supply of able-bodied labour are found amongst the owners (or tenants) of small farms on which an independent household is linked with independent farming*. Not only does this group supply labour-power for itself, but also turns out a surplus ... *These production sites for new labour-power progressively contract wherever the large-scale farm supplants the small. Clearing peasants off the land may release additional land for the large farm, but at the same time it reduces the number of people available to cultivate it. This in itself is sufficient to ensure that, despite its technical superiority, the large farm can never completely prevail within any given country* ... As long as the capitalist mode of production continues, there is no more reason to expect the end of the large-scale agricultural enterprise than that of the small. (ibid., emphasis added)

A propos of this, Kautsky cites an 1850 article by Marx in the *Rheinische Zeitung* in which he says that, ‘As long as bourgeois relations subsist agriculture most move continuously in this cycle of land concentration and land splitting,’ which might imply that Marx was not predicting the extinction of the peasantry.

### **7. Agricultural seasonality and peasant survival: a polemic with Armando Bartra**

Reading Armando Bartra (2006), a compulsory reference in any analysis of the peasantry in Mexico, I became conscious that agricultural seasonality, on which I had based my theory of peasant poverty,<sup>11</sup> also explains the survival of the peasantry in almost all parts of the world, despite the generalised predictions of its imminent disappearance. As my answer to the question as to why peasants have not been crushed by all-powerful capitalism, I stated that capitalism could not function in a pure fashion in agriculture. In such a hypothetical case, 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. Capitalism has to live in symbiosis with the peasantry if it is to function.

Conversely, Bartra’s explanation of peasants’ survival is based on *land rent*:

The primary rent is differential rent; moreover, absolute rent is actually differential rent, since it is paid in proportion to output. *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 ... 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 rent is consubstantial to capitalism and ... favours those capitals controlling agricultural production in detriment of the remaining capitals. (ibid. 20–1)<sup>12</sup>

Bartra explains the alleged trend towards the disappearance of land rent 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, meaning that differential rent is subject to an irreversible declining trend (ibid.: 23). He adds: ‘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 can be forced to work at below average profits and on occasions, at the simple point of equilibrium*’ (ibid.: 21). He makes his theory more explicit:

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.* (ibid.: 23)

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

Yet Bartra, unlike most authors, lucidly explores agricultural seasonality and the capitalism–peasant economy symbiosis that is derived from it:

The contradiction between the discontinuity in farm work and the salaried reproduction of labour is *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* [i.e. the peasant 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. (ibid.: 24–5)

Bartra opens his dialogue with me with the following statement (ibid.: 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 agrobusinessmen, since whereas the former, he says, have to assume the costs of days not worked, the latter do not.’ 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: that the persistence of the peasant economy can be explained more by its function as provider of cheap, temporary (seasonal) labour, without which capitalism in agriculture is inconceivable, than by smoothing differential land rent.

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’ (A. Bartra 2006: 187). Bartra posits that, in pre-capitalist societies, the fluctuating, seasonal nature of work requirements, which is characteristic of activities subject to natural cycles, was dealt with through the diversification of economic activity; this contrasts with the fact that modern capitalist society requires specialisation.

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.* (ibid.: 187)

Bartra conceives the peasantry as a class and calls it the *peasant class*, which ‘has been defined on the basis of a double link with capital: petty commodity production and the reproduction of the partially salaried labour force’ (ibid.: 188). He 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 obtaining of *surplus value* through part-time wage labour are combined’ (ibid.: 189). As we can see, Bartra considers that the performance of seasonal work is a constitutive element of the peasant class. He points out that the peasant sells part of his labour power because his income as a direct producer does not suffice to guarantee simple reproduction (ibid.: 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 his plot of land, he is prepared to work for a salary below the value of his labour power. Thus, the *over-exploitation of peasant wage labour* can be sustained permanently, and therefore the peasant can subsidise the capitalist (ibid.: 270).

In my view, these different forms of peasant exploitation pale in comparison with the main form of exploitation, *which occurs through the peasantry absorbing the total cost of agricultural seasonality.* Even if there were no other forms of exploitation, the peasant would be condemned to permanent itinerant poverty.

My thesis in this fundamental point of the dialogue, as already stated, is this: *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 rule of the game (you work, you get paid, and you leave), and given the formation of prices in markets in which peasant and capitalist farmers compete and in which the aforementioned rule prevails, only the days worked are incorporated into production costs and are therefore reflected in farm prices. The peasant farmer therefore obtains a net income from his plot of land that is approximately equal to the value

of his labour power for the days effectively worked. Since he and his family have to eat every day, he is obliged to try to complement his income by becoming an *itinerant pauper*. *Pure capitalism, I conclude, is impossible in agriculture.*

I made public these ideas in my weekly column in the Mexican newspaper *La Jornada* (Boltvinik 2007a). In his reply, Bartra (A. Bartra 2007) made three comments. Firstly, he pointed out that peasants' 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 power and when he migrates. These other forms of exploitation obviously cannot be denied. In a journal article in 2007, I held that:

In Mexico, family agricultural producers live in abject poverty: 1) because 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 borne almost exclusively by peasants. (Boltvinik 2007b: 37)

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 all of us*. If we subsidised 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 intervened 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.

Secondly, Bartra points out that the most important difference between his proposal and mine lies 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 illustrates his argument with Cuba's virtually *monocrop* sugar economy. Plantations constitute an extreme case

of monocropping agriculture and exacerbate the seasonality of the demand for labour. Additionally, 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 in maintaining the autonomy of family agriculture. The sugar industry provides an example of the limits (or obstacles) that may be faced on the path of diversification. Since diversification is highly desirable for a peasant unit, one could ask why observed trends are going in the opposite direction. Why are peasant units increasingly *less* diversified? And why are the *milpa* fields (an ancient and highly diversified way of using land in Mexico) disappearing? Bartra is right: diversification not only entails the fullest use of human resources and often of land (such as the bean–maize combination in which the former fixes in the soil the nitrogen used by the latter), but also has enormous ecological advantages. Since Bartra 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 rational agriculture.

Thirdly, Bartra 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 where land rent becomes irrelevant. Bartra also states 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’.

I do not agree, however, with the minimisation of the importance of my thesis on rural poverty (as compared with the ecological dimension) with which Bartra’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 billions of peasants. Capitalism does not only pillage nature; it brutally pillages human reproduction, and therefore it pillages the human species itself. In addition, it does so now on a global scale with more strength than ever. In other words, capitalism pillages subject and object, making its abolition an urgent task. Unfortunately, this will probably occur only 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 pointed out in section 5, Frank Ellis found two reasons for the persistence of the peasantry in the Marxist bibliography on peasants. One of the reasons is the difference, identified by Marx in Volume II of *Capital* (1978 [1885]), *between the duration of the agricultural productive cycle (production time) and the time when work is productively employed (working time)*; this refers to the seasonal pattern of the use of labour, a factor that constitutes the core of my theory on poverty and persistence of the peasantry. Concerning this reason, he cites only the Mann–Dickinson thesis, which I shall now examine (Mann and Dickinson (M&D) 1978). In a subsequent book (1990), Mann mentions that the position they hold is very similar to what Ariel José Contreras (Contreras 1977) had said a year earlier in a Mexican journal, although this article went largely unnoticed, given the dominance of the English language.

M&D acknowledge that the prediction about the generalisation of capitalism in world agriculture has not been fulfilled; even in the centres of industrial capitalism, farms based on family labour (family farms) are strikingly vital:

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.* (M&D 1978: 467, emphasis added)

They see this persistence as a challenge to Marx’s notion of the universality of capitalism and aim to fill 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 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). Marx derived it 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, destroying the old forms of production. This prediction by Marx is intended to be universal, say M&D, and '[t]he demonstration that Marx's analysis could be generalised to the countryside was perhaps the essential achievement of Lenin's *Development of Capitalism in Russia*' (Lenin 1967 [1899]). They add that Plekhanov, Kautsky and Mao Zedong (M&D 1978: 469) shared this view of the instability of PCP.

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"*' (ibid., emphasis added). In order to explain this persistence, many have resorted to non-Marxist theories, say M&D, who examine two groups of these theories. In the first group, they place Chayanov, who highlighted the fact that the family peasant unit does not seek to obtain profits and therefore continues producing even when it does not obtain the average rate of profit, which gives it a competitive advantage over capitalist units. Among criticisms levelled against this approach, they stress that it isolates the family unit from capitalist surroundings. However, the critique that I find most convincing is that *the argument about the 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. M&D argue 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.<sup>13</sup> None of these approaches consider that Marx's theory offers an adequate explanation of the persistence of family farms, according to M&D, 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' (ibid.: 471).

Like Ariel José Contreras, M&D in their thesis and Mann in her 1990 book 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) on *the difference between working time and production time* (a conceptual distinction made by Marx in Volume II of *Capital*) and on other natural characteristics such as the perishable nature of the products.

M&D 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), *but 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, and so on), he highlights the fact that this phase is particularly important in agriculture and gives the example of cereals, where *there is a long period when working time is suspended while the seed matures in the earth*. Our authors 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’ (ibid.: 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. Theirs is a partial, predominantly 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; this is obvious but does not lead to the conclusion that therefore ‘capital will shy away from such areas of production’ (ibid.: 474). This conclusion is similar to the one reached by Contreras: ‘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*’ (Contreras 1977: 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 prices of production rather than on exchange values, as Marx shows in Volume III of *Capital* when he analyses the tendency towards the equalisation of 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 and 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 the annual cycle of agriculture, could not be capitalistic. The most interesting part of M&D'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. (ibid.: 477)*

In the first sentence, the authors establish a link between the seasonality of work and the differences between working and production time. These are obviously two sides of the same coin, two ways of looking at the same phenomenon; 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, my answer to the question about why the peasantry persists is its symbiosis with agricultural capitalism. I think that the fundamental difference is that M&D are trying to analyse why *family farms* persist (which, as I have said, are not poor and spend the periods without work in idleness), whereas my question concerns the persistence of *peasant family units*. 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. M&D'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 exploring Marx's thoughts on the subject, I begin with M&D's and Contreras's references to Volumes II and III of *Capital* and to *Grundrisse*. 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 *Grundrisse*] – can only be due to natural conditions ...' (Contreras 1977: 887–8; quoting Marx 1972 [written 1857–58; first published 1939]: 191)

M&D, who also refer to this passage, begin by citing the first paragraph of Chapter XIII of Volume II 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. (Marx 1978 [1885]: 316)

This 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 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.* (ibid.: 316–17)

M&D return to *Grundrisse* but fail to see a key sentence in the text from which they take certain phrases; this is a brief section called ‘Difference between production time and working time – Storch’ (Marx 1973 [written 1857–58; first published 1939]: Notebook VI, 668–70). Marx begins by eliminating the assumption of equality between working time and production time, exemplifying their lack of coincidence with agriculture, where 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 the rotation of the capital cycle would be slower for the product with the longer production time (the agricultural one). Marx adds something to this (note the first phrase in italics, which shows what M&D failed to see, and which defeats their 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 equalisation 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. [Footnote: 'It is clear that other aspects also enter in with the equalisation of the rate of profit. Here, however, the issue is not the *distribution of surplus value but its creation.*'] (Marx 1973 [written 1857–58; first published 1939]: 668–9)

It is a central quote. On the one hand, it shows the untenability of M&D'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 prices of production and values, redistributing capital profits. They also seem to forget that profit rates and surplus rates are extremely different.

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 resolved the problem of the value of the agricultural labour force: is it the cost of its annual reproduction or just what is required to reproduce labour during the days in which the individual works effectively in agriculture? In Volume I of *Capital*, in which he deals with the value of labour power, Marx does not introduce the problem that emerges 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 power again.

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

Marx clearly saw the seasonal nature of agricultural work but he expressed this perception in *Capital* only in Volumes II and

III, not in Volume I where he develops the theory of the value of labour power. This is despite the fact that he was aware of the problem when writing Volume I, as shown by the quote from *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*; these are both assumptions that Marx analysed in Volumes II and III, and found 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 work continuity assumption.

In Chapter I, Marx characterises commodities as useful objects or *use values*, which, as *crystallisations of abstract human work* (expenditure of labour power), 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. However, 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*. Wealth (constituted by 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 deals with the transformation of money into *capital* (money that increases its value). He has not yet worked out how this is possible, although he states that it cannot arise from circulation or money, but he resolves 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*. Marx therefore sets out to undertake a detailed analysis of the peculiar commodity known as labour power, which, like all commodities, has a value. Marx asks how this value is determined. The answer, which is central to the theory of *surplus value*, leads Marx (in my opinion) to *force the concept of production* so that labour power can be conceived of as a *commodity that has been produced*. This answer only applies fully to continuous labour processes, where no interruptions are present during which the worker is left unpaid. My comments are 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. As 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 production of labour-power is the same as that 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. 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 months 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 Petty here – although the term *continuous* refers here only to intergenerational continuity, it is evident that the whole argument is based on the assumption of all types 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 who look after children and perform domestic chores, without which there is no production of labour power.] 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 total of these outlays may be spread over the year, they must be covered by the average income, taking one day with another. [When Marx says *every day* 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 1976 [1867]: 274–6)

What happens when the *reality of discontinuous work in agriculture* is introduced into this theory of the value of labour power? Since talking about the labour power 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 is carried out based on capitalist rules.

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

In Volume 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 hold, is the main cause of the poverty and persistence of the peasantry. Chapters 20 and 21 of Volume II develop the Simple Reproduction Scheme (SRS) and the Reproduction on an 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 – thereby ignoring an essential feature of capitalism – the scheme shows the basic logic of reproduction of the capitalist system.

In order to formulate the 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 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 that part of capital that is invested in the means of production – machinery, buildings, raw and auxiliary materials – and whose value is transferred only to the product; this explains why he calls it *constant*. For its part,  $V$  is the amount invested in hiring labour power; Marx calls this component of capital *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 power itself contains. Therefore, the total value ( $W$ ) of the product in Sector I is equal to  $C_1 + V_1 + S_1$ , and that of Sector 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, it expresses the income of someone ( $V$  for the workers,  $S$  for 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 the SRS, that both workers and capitalists dedicate their entire income ( $V + S$ ) to purchase the means of consumption and that the income represented by  $C$  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 disproportionality between the two sectors of production,  $C_2$  must be the same as the sum of  $V_1$  and  $S_1$  ( $C_2 = V_1 + S_1$ ),<sup>14</sup> since Sector II of the means of consumption needs to buy from Sector I of the 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 Sector II for a sum equivalent to their income ( $V_1 + S_1$ ).

Despite the arguments about how alien the SRS is to capitalism, it shows *how capital is reproduced*. However, 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 Volume I of *Capital*, reproduction not only includes those who 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 that person having to work*), *capital reproduction also entails that of the labour power* (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 the 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) – which is where we will place agriculture – will not be sufficient for the reproduction of the labour power. 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.’ If we replace *today* with *during sowing time*, and *tomorrow* with *during the harvest*, we will see that seasonal work does not meet this condition, since at the end of the sowing time, the owner of labour power will lack the means to be able to subsist until harvest time. There will therefore be no available labour power for this task: the person who did the sowing will have died.

The SRS requires a third 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 for the number of workers and their families ( $N$ ) in each sector,  $N_1$  and  $N_2$ . Let us call the daily value of the labour force  $v$ . So  $V$  is equal to the product of  $v$  multiplied by 365 days and multiplied by  $N$ :  $V = V_1 + V_2 = v365N$ . *This third equation, which is 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 in 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 in such a way 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 each 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 in a similar way to constant capital, like a machine or draught animal.

## 12. Towards a general theory of value

By divine mandate, stipulated in the Ten Commandments, virtually all over the world people work for six days yet are paid for seven; this was maintained even during the worst moments of over-exploitation of labour 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 portion of those who work today do so for five days a week and receive a salary (wage) for seven. School teachers receive a salary for twelve months of the year although they only work ten. Public university professors, in many countries, 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 twenty-four 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.<sup>15</sup> *Work is discontinuous but payment is continuous* in all the cases mentioned above. But wage 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 labour power and to consider discontinuous labour processes apparently destroys Marx's theory of value. The solution to this problem involves considering that, in addition to incorporating live work and therefore value, *labour power transfers to commodities the value of its labour power during the days when it does not work each 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  $W_A = C_A + V_{AL} + S_A$ . With the proposed change, it would 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* that is valid for both continuous and discontinuous processes, one in which the reproduction equations not only express the conditions of the reproduction of capital but also those 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 the 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 yes, can we think that the value of consumption for 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. There we found expressions such as: production and reproduction (or maintenance)

of labour power; the value of labour power represents only a set amount of average socially necessary labour objectified within it; during the work process, a person uses up a set amount of human muscle, nerves and brain that must be replaced; and the *continuous* presence of labour power is required in the market, which is why the sum of the means of subsistence includes those necessary for the substitutes (children) of the mortal worker. But can we speak of *production of labour power as a commodity*?<sup>16</sup> 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 socio-biological process to that of other species. That is why continuing to speak of the *production of labour power* requires reference to the life process of individuals, to the satisfaction of needs, to couple formation and to the procreation and raising of offspring. We have to be aware *that the production of labour power is the other side of the family consumption of means of subsistence*. In the famous ‘Introduction’ to the *Grundrisse*, 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*.  
(Marx 1973 [written 1857–58; first published 1939]: 90–1)

What Marx says in this passage about use values, and about the link between human beings and nature, he takes up again in *Capital* as his 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 peasants, 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 per cent of their income (for example, in the state of Puebla, Mexico, or the north-western tableland of Guatemala) (de Janvry 1991: Table 10).

The numerical importance of peasants in Latin America (the number of units nationwide tends to be hundreds of thousands or, 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 American compared with those of the First World, both today and many decades ago: 1) the low effective protection of agriculture – in relation to industry – during the prolonged period of industrial import substitution; 2) the abrupt trade liberalisation of the 1980s and 1990s, which has led to the mass import of subsidised agricultural products from rich countries, 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, and are 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 are 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 and undignified manner. This could be interpreted as the fact that *their societies 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 be achieved only if the 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 assume only 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 (i.e. 122 days). Let us also assume that maize is the only crop and that both family and capitalist farmers use the same technological package. The only difference is that capitalist units hire wage labour per day while family producers perform all the 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/her to pay for his children's education' (as the Mexican Constitution defines minimum wages): in other words, that minimum 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 a closed market), the price is determined by the price at which the former are prepared to sell. Since the former pay for only the 122 days worked, they are prepared to sell the production of each hectare at \$110 (\$40 for input costs, \$60 for labour and \$10 of profits).<sup>17</sup> So family farmers are also forced to sell at \$110, as if their labour were a third (\$60 instead of \$180 for labour, \$40 for inputs and \$10 of 'profits'), rather than \$230 (\$40 for the cost of inputs, \$180 for the costs of maintaining labour and \$10 of profits). 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, which 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 input costs) and would be exactly on the poverty line. It would not be poor.

*Through the hypothetical example above, I have shown that even if we eliminate (through assumptions) the other poverty factors of peasant producers (lower productivity than their capitalist competitors and labour valuation below the cost of satisfaction of basic needs),*



peasant families *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 poverty are false in countries from the ‘South’, they are not in most of the developed world, including the countries of the then European Common Market when the Common Agricultural Policy (CAP) was implemented.

The enormous agricultural subsidies of the First World, which some have calculated at \$360 billion 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 an 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 the income necessary for survival and reproduction. They would experience the itinerant poverty of Third World peasants.

One of the goals that the CAP sought to achieve was precisely to avoid farmers’ poverty. According to the Buckwell Report (Buckwell 1997),<sup>18</sup> in most European Union (EU) countries agricultural producers’ incomes *are on a par with the average income of urban households.*

With a series of enormous technological and financial obstacles to face international 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. Let’s examine the Farm Security and Rural Investment Act (the Farm Bill of 2002), which expired in 2008. That Act replaced the Federal Agriculture Improvement and Reform Act of 1996 (the Fair Act of 1996), which was in force from 1996 to 2002.<sup>19</sup> These US laws are in fact multi-annual budget allocation mechanisms. The 2002 Act established subsidy programmes for specific products, international trade and conservation programmes, among others. The subsidy programme includes a 70 per cent to 80 per cent increase over the previous one.

The central component of this Act was anti-cyclical, meaning that American farmers were compensated for market fluctuations, so that they continued to receive high prices although prices may have

slumped, which might have led to over-production. The international consensus, which led Mexico to eliminate guaranteed prices for farm products, is to eliminate farm subsidies that create incentives for over-production.

The 2002 Act included three types of subsidies:

1. *Fixed payments* per farmer for each eligible crop. Soya bean and certain oilseeds were added. Payments were higher than under the previous Act.
2. *Compensation payments* when the market price is lower than a price set by government. These are called loan rates, apparently because prices are set when the farm receives credits to sow crops. This countercyclical subsidy already existed in the previous Act but was increased by approximately 5 per cent and a few pulses were added to the list of eligible crops.
3. *New countercyclical subsidies*, which were paid when farmers' total income (the sum of what they obtained through the market plus the two previous subsidies) failed to achieve a predetermined level. Although the previous Act did not have a similar stipulation, the US government had introduced emergency packages in response to the drop in prices since 1998.

'What is wrong with countercyclical subsidies?', asks the EU'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.*

With NAFTA (the North American Free Trade Agreement), which 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 US farmers worrying about the price at which those exports 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 meant that Mexico's US farm imports increased while its exports to the US decreased. 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 increased financing for programmes for the creation, expansion and maintenance of overseas markets for US farm products. The US export credits and the US subsidy programme for exports remain. The Organisation for Economic Co-operation and Development (OECD) has identified these subsidies as the source of 97 per cent of the world's farm subsidies and they have been condemned by the World Trade Organization as illegal, which has obviously not prevented their continued use.

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, namely Mexico's capitalist producers and US and Canadian producers; 2) labour power is undervalued in the country, particularly in rural settings; and 3) the cost of seasonality is paid almost exclusively by peasants. In order to overcome the poverty of family farmers, these three factors must be overcome. The productivity disadvantage can be offset through a combination of trade protection measures and the promotion of technological development. Manuel Díaz, an outstanding expert on agriculture in Mexico, points out 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' (personal communication). This was not the case in Mexico in the 1960s and 1970s. Whereas at that time there was a growing development of agricultural research, an agricultural advisory service (*extensionism*) and a protected agricultural market, conditions have been reversed.

The three central factors explaining the undervaluation of labour power in Mexico are: 1) the forces of globalisation 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 protected from external competition. In order to prevent resources allocated to subsidies 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 require only subsidies to deal with the asymmetry of international competition, and these subsidies would be common to all producers. 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 inputs and machinery) would be the same worldwide, while peasants' and 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 – and this would have to be proved empirically – 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 reduce rural poverty substantially, is therefore not to combat the agricultural subsidies of First World countries but to subsidise their peasants as well and to protect them from low foreign prices.

## Notes

1 For space reasons, the original background paper has been abridged slightly.

2 See section 2 of the Introduction for a critical appraisal of the World Bank's and International Fund for Agricultural Development's estimates of world and rural poverty respectively.

3 The exploitation of peasants has been emphasised by, among others,

Henry Bernstein (1982), who has coined the expression 'simple reproduction squeeze'.

4 It is very significant that both in English and Spanish a living vegetable and a factory are called by the same name – *plant* – a term that denotes a given location in both cases.

5 This section is limited to the economic perspective and does not

attempt to review the vast existing literature. For such a review, see Teodor Shanin (1973).

6 Although very little research has been undertaken to evaluate the common agricultural practice of mixed crops, the research that has been conducted favours the practice (see Belshaw and Hall 1972: 20).

7 For an explanation of what *ejido* means, see note 4 in Damián and Pacheco's chapter in this book (Chapter 6).

8 For a detailed analysis of this theory, see Frederick V. Waugh (1970: 89–106).

9 Here Ellis cites the Mann–Dickinson thesis, which I shall discuss later on (Mann and Dickinson 1978).

10 Here Djurfeldt uses, probably by mistake, neither the plural English word *latifundia* nor the Spanish plural word *latifundios*. Probably he wanted to use the synonym of rich farmers in Spanish, which is *latifundistas*. As this makes more sense, I have changed it.

11 This theory, presented in section 4 above, had been conceived decades ago. The first published version of this approach was Boltvinik (1991).

12 Whereas absolute land rent is the portion of rent that corresponds to any unit, differential rent is associated with differential 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 landowners, differential rent

will appear to them as a higher rate of profit, higher than the one obtained by capital in other branches, and 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.

13 They cite two authors on this but omit perhaps the most important one – John Brewster – whose classic article on the process of the machine in agriculture and industry (1970 [1950]) I have examined in section 5 above. He argues that mechanised methods are as compatible as manual techniques with family or multifamily units.

14 Paul M. Sweezy (1970 [1942]: 76–7) derives this condition from two obvious equations of equilibrium. First, 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:  $C_2 + V_2 + S_2 = V_1 + S_1 + V_2 + S_2$ . Second, in order to only and exactly replace the capital worn out or used in production,  $(C_1 + C_2)$  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 equal sign from both equations, one arrives at the same result, and only the condition mentioned in the text is required.

15 During sleep, our bodies operate at the basal 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*; this represents approximately 60 per cent of the energy expenditure of someone performing a high-intensity job and 80 per cent of that of someone performing a low-intensity job.

16 Karl Polanyi (2001 [1944]: 75) 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'.

17 These figures are in fictitious units.  
 18 Available at [http://ec.europa.eu/agriculture/publi/buck\\_en/index.htm](http://ec.europa.eu/agriculture/publi/buck_en/index.htm).  
 19 This law was replaced in June 2008 by the Food, Conservation, and Energy Act of 2008, also known as the 2008 US Farm Bill. The law maintains the logic of agricultural subsidies of the previous law.

## References

- Bartra, A. (2006) *El Capital en su laberinto. De la renta de la tierra a la renta de la vida*. Mexico City: Itaca.
- (2007) 'El campesino en su laberinto', *La Jornada* (Mexico), 20 July.
- Bartra, R. (1974) *Estructura agraria y clases sociales en México*. Mexico City: Ediciones Era.
- Belshaw, D. and M. Hall (1972) 'The analysis and use of agricultural experimental data in tropical Africa', *East African Journal of Rural Development* 5 (1–2): 39–71.
- Bernstein, H. (1982) 'Notes on capital and peasantry' in J. Harriss (ed.), *Rural Development: Theories of peasant economy and agrarian change*. London: Routledge, pp. 160–77.
- Boltvinik, J. (1991) 'Presentación' in *Economía popular. Una vía para el desarrollo sin pobreza en América latina*. Regional Project to Overcome Poverty in Latin America. Bogotá: United Nations Development Programme, pp. vii–lv.
- (2007a) 'El capital en su laberinto', *Columna Economía Moral, La Jornada* (Mexico), 16 March.
- (2007b) 'Hacia una teoría de la pobreza campesina', *Papeles de Población* 13 (54): 23–38.
- Brewster, J. (1970 [1950]) 'The machine process in agriculture and industry' in K. Fox and D. G. Johnson (eds), *Readings in the Economics of Agriculture*. London: Allen & Unwin.
- Originally published in *Journal of Farm Economics* XXXII (1): 69–81.
- Buckwell, A. (1997) 'Towards a common agricultural and rural policy for Europe'. Brussels: European Commission. Available at [http://ec.europa.eu/agriculture/publi/buck\\_en/cover.htm](http://ec.europa.eu/agriculture/publi/buck_en/cover.htm).
- Cepal (1982) *Economía campesina y agricultura empresarial. Tipología de productores del agro mexicano*. Mexico City: Siglo XXI Editores for Comisión Económica para América Latina y el Caribe (Cepal).
- Chayanov, A. (1966) *The Theory of Peasant Economy*. Edited by D. Thorner et al. Chicago IL: Homewood Publishing.
- Contreras, A. (1977) 'Límites de la producción capitalista en la agricultura', *Revista Mexicana de Sociología* 39 (3): 885–9.
- de Janvry, A. (1991) 'El caso latinoamericano' in *Campesinos y desarrollo en América Latina*. Bogotá: Tercer Mundo Editores.
- Djurfeldt, G. (1982) 'Classical discussions of capital and peasantry: a critique' in J. Harriss (ed.), *Rural Development: Theories of peasant economy and agrarian change*. London: Routledge, pp. 139–59.
- Ellis, F. (1988) *Peasant Economics: Farm households and agrarian development*. Cambridge: Cambridge University Press.

- Fox, K. and D. G. Johnson (eds) (1970) *Readings in the Economics of Agriculture*. London: Allen & Unwin.
- Harriss, J. (ed.) (1982) *Rural Development: Theories of peasant economy and agrarian change*. London: Routledge.
- Kautsky, K. (1988 [1899]) *The Agrarian Question*. 2 volumes. London: Zwan Publications. In Spanish: *La cuestión agraria*. Mexico City: Ediciones de Cultura Popular (1974).
- Lenin, V. (1967 [1899]) *The Development of Capitalism in Russia*. Moscow: Progress Publishers.
- Mann, S. A. (1990) *Agrarian Capitalism in Theory and Practice*. Chapel Hill NC: University of North Carolina Press.
- Mann, S. A. and J. Dickinson (1978) 'Obstacles to the development of a capitalist agriculture', *Journal of Peasant Studies* 5 (4): 466–81.
- Marx, K. (1972 [written 1857–58; first published 1939]) *Elementos fundamentales para la crítica de la economía política (Grundrisse) 1857–1858*. Volume 2. Mexico City: Siglo XXI Editores.
- (1973 [written 1857–58; first published 1939]) *Grundrisse: Introduction to the critique of political economy*. Harmondsworth, UK: Penguin Books.
- (1976 [1867]) *Capital: A critique of political economy*. Volume I. Harmondsworth, UK: Penguin Books.
- (1978 [1885]) *Capital: A critique of political economy*. Volume II. Harmondsworth, UK: Penguin Books.
- Polanyi, K. (2001 [1944]) *The Great Transformation*. Boston MA: Beacon Press.
- Shanin, T. (1973) 'The nature and logic of the peasant economy' (two articles), *Journal of Peasant Studies* 1 (1 & 2): 63–80, 186–206.
- Sweezy, P. (1970 [1942]) *The Theory of Capitalist Development*. New York NY: Monthly Review.
- Vergopoulos, K. (1978) 'Capitalism and peasant productivity', *Journal of Peasant Studies* 5 (4): 446–65.
- Waugh, F. (1970) 'Cobweb models' in K. Fox and D. G. Johnson (eds), *Readings in the Economics of Agriculture*. London: Allen & Unwin.