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Lindberg, Staffan; Djurfeldt, Göran; Venkatesh B, Athreya; Böklin, Gustav

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Identification of Agrarian Classes: A Methodological Essay with Empirical Material from South India

Venkatesh Athreya, Gustav Böklin,
Göran Djurfeldt and Staffan Lindberg*

This article is primarily methodological. It contains a discussion of the concept of agrarian class, and an attempt to develop a method for class analysis, that is, for identifying the class status of individual households, and thereby to develop a tool for assessing the numerical strength of various classes. The article is part of a wider study of production relations in parts of Tiruchy District in Tamil Nadu, and the impact of these relations on agrarian change. After the introductory sections on the concept of class, on the study area, and the relations of production prevailing there, two methods of classification are discussed and evaluated, Patnaik's exploitation index and our own surplus criterion.

I. THE CONCEPT OF CLASS

In the Marxist tradition the classical definition of class has been formulated by Lenin. Since it would be unwise for a study on agrarian class not to be explicit on this fundamental point, we will start by quoting Lenin:

> Classes are large groups of people differing from each other by the place they occupy in a historically determined system of social production, by their relation (in most cases fixed and formulated in law) to the means of production, by their role in the social organisation of labour, and, consequently, by the dimensions of the share of social wealth of which they dispose and the mode of acquiring it. Classes are groups of people one of which can appropriate the labour of another owing to the different places they occupy in a definite system of social economy [*Lenin,* 1965: 421].

In the Marxist tradition one often meets with definitions of class which are *composite,* in the sense that they integrate political and ideological criteria

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with economic ones in the definition. In this study we will apply a *purely* (or narrowly, if you wish) *economic* definition, in line with the one quoted above. This reflects a *methodological principle,* and it does not mean that we regard political or ideological phenomena as unimportant or ephemeral. Our aim here is to explore the utility of class as a concept in a socio-economic analysis. We are not at present interested in classes as actors on the political scene, although an important reason for working with an economic analysis of classes is an interest in the way political processes are related to the economic structure.

The peasantry as an actor on the political scene is the subject of a voluminous literature, while the literature dealing with the internal stratification of the peasantry is much slimmer. (Parts of the literature are summarised in Shanin [1980].

The difficulties in classifying the peasantry stem from the fact that they share one basic relation to the means of production (being cultivators of the land participating with their manual labour in the process of production). True, they often differ in another basic relation (in being owners *or* tenants of the land they cultivate), but this difference may not have a simple and unequivocal implication for their class status. Despite the basic similarity in the relation to the land and to the process of production, peasants differ enormously in 'the share of social wealth of which they dispose'. This difference is mirrored in the 'poor', 'middle', and 'rich' epithets so often used about peasants. On the face of it, these epithets only reflect a *quantitative* difference between peasants; but in a deeper analysis we are likely to find *qualitative* differences – differences between exploiters and exploited which are dissimulated under the formal identity in the relation to the land, and the merely quantitative difference in wealth.

II. THE SURVEY

The study deals with survey and other material collected in six villages sampled from two Panchayat Unions in Tiruchy District (Manaparei and Kulithalei Unions), in Tamil Nadu. The two Unions together include 65 administratively defined 'villages'. The area was selected because it was judged to contain within itself much of the diversity in agrarian structure characteristic of the whole of Tamil Nadu. (See Athreya *et al.* [1979]).

The six villages were chosen with probability proportional to size (so-called PPS-sampling (see Cochran [1977]). Within each village we used a kind of pseudo-stratification: we took a simple random sample from 99 per cent of the agrarian population (the main sample), and then we did a census of the remaining one per cent, the richest households in each village (what we call the UPC). In this way the very skewed distribution of many key variables (like wealth) would be covered through over-representation of the tail-enders.

An extensive interview was conducted with each household selected. It covered most aspects of their farm economy for an entire crop-year – the year ending with the current season. Data collection lasted from November 1979 to May 1980, so the reference year is not identical for all households.

Adequate coverage of land tenure was secured by extensive preparatory investigation – in principle we knew the extent of land owned and cultivated by the household *before* the interview. The investigators were thoroughly coached in farm economy, and were taught to look out for and probe into inconsistencies, evasions, underestimates, etc. – sometimes by collecting information from neighbours and other informants. The interviews were analysed in the field by totalling up farm budgets, and by doing the preliminary classification. All this, plus the considerable efforts made to create rapport by explaining the purpose of the study to the respondents, has improved the quality of the data.

The heart of the interview was the farm-operations form in which, for all the crops cultivated on a farm, all operations were taken down, with details of inputs used, labour expended and cash spent. From these data a three-fold account can be built up covering (1) inputs and output in material terms, (2) labour used, specified by type (family, exchange, hired), and (3) cash flows (cost of inputs, income from marketing).

The resulting structure of the material enables us to work, not only with a conventional farm account (primarily in money terms), but also with other types of accounting, for example, with a 'Chayonavian' type of account where expenses of family labour are weighted against an income received partly in cash and partly in kind.

III. TWO AGRARIAN ECOTYPES

The six sample villages are located in two distinct areas, three in each. We call them the *wet* and the *dry* areas.

The wet area is a canal-irrigated belt on the south bank of the river Kaveri. It has very fertile black soils and an eminent system of irrigation, receiving water for 10–11 months in a year. This makes it possible to grow two paddy crops in a year, plus a third crop of sesame or black gram. It also allows the cultivation of long-duration, irrigated crops like banana and sugar-cane.

The dry area covers the major part of the field area, but has only about half of its population, spread in smaller settlements. In contrast to the wet area, which obtains water from the rain-rich mountains on the west coast, the dry area is entirely dependent on local rainfall, less than 1,000 mm. a year. Evapotranspiration is high in this subtropical climate, and is exceeded by rainfall only in October–November with the North-East monsoon. Some of the rain is collected in tanks, and is used for a single crop of paddy, but this system covers less than ten per cent of the operated area. Well irrigation is a more common system. Wells are dug both to supplement irrigation in tank-fed lands, and as an independent source of irrigation. Forty-four per cent of the operated area is well-irrigated. Double and triple cropping occurs, depending on the quality of the well.

More than half the operated area in the dry villages depends on rainfall alone. *Solam* (Sorghum vulgare), *kumbu* (Pennisetum typhoide), and groundnut are the major crops in dry land. On irrigated lands paddy, too, is

grown, plus a variety of other crops including various millets and grams, groundnut, chilli, cotton and oilseeds.

IV. RELATIONS OF PRODUCTION

This is not the place to give a full description of the relations of production prevailing in the area; but class relations are established within a determinate set of relations of production, so at least a short account is called for. It will show that the relations of production do not 'sort' the population into distinct aggregates. Thus, the relations of production do not on their own determine the class structure.

Ownership and Cultivation Rights in Land

Private ownership of agricultural land has been fully established in India since the colonial period. The system of inheritance is in the main patrilineal with equal rights for all sons. Ownership rights are bought and sold, but since land is almost only disposed of in dire necessity, the turnover rates in the land market are normally small.

Cultivation rights are transferred from owners to non-owners. In the wet area, 53 per cent of all land operated is leased-in, while in the dry area only three per cent is. There is also some usufructuary mortgage of land in the unofficial credit market.

This is a first example of the way in which individuals are 'sorted' by the relations of production: the categories of owners and cultivators of land are not identical, and the relations between the two categories have varying content depending upon whom it relates.

We meet with the classical system of sharecropping in which the entire surplus product is appropriated by the landowner. But this system which once was all-dominating in the wet area has been partially displaced as a result of two different processes:

(1) Our wet villages belong to an area which has had a lively tenants' movement which, before it collapsed, succeeded in giving some life to a land reform Act which in most other areas has remained a paper law. As a result, almost half of all leaseholds in the wet area are registered with the courts, and the tenants pay regulated rates of rent.

(2) Capitalist tenants operate in the lease-market, outbidding sharecroppers of the traditional type. Handsome rates of return, especially in banana cultivation, enable capitalist farmers to pay the same or slightly higher rates of rent than the poor sharecroppers, and still allow them to earn a profit on their capital investment.

Lessors of land include not only big landlords of the traditional type living on rents, but also smaller owners for whom other sources of income are more important. Many owners of land under registered leaseholds are absentees, city-people with white-collar occupations. This is to a large extent a reflection of the fact that many of the old landlord families have opted out of agriculture, into city-based jobs.

Excepting the absentees, most small landowners manage to cultivate their land themselves – they do not contribute much to the supply on the lease market. Here, there is a marked contrast with the dry area where many small landowners keep their land fallow, since they lack other means of production (bullocks, irrigation facilities, money capital). This occurs hardly at all in the wet area.

This short analysis of ownership and cultivation rights enables us to single out two distict classes in the agrarian population. Neither of them cultivates any land on their own:

(1) the agricultural labourers; and
(2) the landlords.

Households in the first group may occassionally own some land; in fact, they often do in the dry area, but their land does not give them more than a *marginal income* in the form of rent. These are the agricultural labourers who have to subsist mainly on selling their labour-power.

Households in the second group derive their income mainly from land rent. They are the pure landlords.

Neither of these groups belongs to the peasantry proper. The analysis of ownership and cultivation rights, in fact, does not take us far in the analysis of the core group of the peasantry – those who operate, and, often but not always, also own some land.

Means of Production and Irrigation

The two most important means of production are irrigation works and draught power. Other means of production, like tools and implements, are so few, simple and cheap that they can hardly be monopolised. Thus they are insignificant for our class analysis.

There are agrarian economies where the ownership of draught animals are more important than the ownership of land for a peasant's class position. In our area this is not so. There are cultivating households who do not own cattle at all, who hire the ploughmen they need in cultivation. So, obviously lack of draught power is not an absolute barrier to cultivation. There are also owners of draught animals who do not cultivate any land, but it is not very frequent: one per cent of the agricultural labourers in the wet area own bullocks, and seven per cent of those in the dry area.

Non-availability of draught power may none the less be one important reason why many small landowners let their land lay fallow in the dry area. Likewise, it may keep many agricultural labourers away from the lease-market in the wet area.

Tractors and power-tillers have to a certain extent replaced animal draught power. Ownership of such machines is a clear indicator of class status, unlike ownership of bullocks. But irrigation works are the most important forms of investment in the land, leading to an increased potential, both in terms of the number of crops that can be grown in a year, and in terms of productivity per

crop. As is well known from the debate on the Asiatic mode of production, there is a communal or collective aspect to irrigation which has interesting social consequences.

Large-scale irrigation works, like the whole Kaveri system benefiting our wet area, are forms of state property (and thus a form of state capital) administrated by state officials. The interesting fact is that while the capital is state-owned, appropriation is private. The state appropriates only marginal shares of the huge surplus engendered by irrigation: irrigation fees are small, land taxes are marginal (although higher than on dry lands), and there are no taxes on agricultural income. The considerable concentration of wealth in the hands of the small number of big landowners in the wet area is thus something like a gift from the state, renewed yearly. This contradiction is even more glaring since, as a *public* enterprise, large-scale irrigation works are not regarded as profitable (cf. Pant [1982]).

The small tanks of the dry area are usually quite old. Their history is not known in detail, but they have usually been constructed through forms of local co-operation. Tanks, too, are owned and managed by the state. They are not in general maintained properly. Damage to embankments and sluices are common. So is silting. Therefore, the production potential of the existing tanks is not tapped. There is also considerable scope for expanding tank irrigation and, thus, for making better use of the scanty and unevenly spread rainfall. One background to this state of affairs is the investment in well irrigation which allows landowners to solve their irrigation problems individually. Wells have been used for centuries in Tamil Nadu both as a supplementary source of irrigation in tank-fed lands, and as an independent source in *thottam* (garden) lands. Before the advent of the pump, the low productivity of the old method of drawing water from the wells with the help of oxen *(kavalai)* put a barrier to the expansion of this form of irrigation. One man working a full day with a pair of bullocks can hardly irrigate more than an acre or so.

This labour intensity means that there was little surplus labour to be appropriated from kavalai-operated lands. Therefore, kavalai can only be operated by cultivators commanding lots of unpaid labour: that is, either by poor or middle peasants with reserves of family labour, or by landlords with bonded or unfree labour.

The pump has changed all this. The owner of a well and a pumpset can now irrigate his land at a low cost in terms of both labour and cash. The rapid expansion of well irrigation since the mid-1960s has created a new scope for surplus appropriation in the dry areas. As we will see, this revolution has had a definite impact on the class structure.

Forms of Labour

There are two main types of labour in the area. The first one is *family labour,* that is, when the cultivator and members of his family/household work on their land. In line with the Chayanovian tradition we term this self-

exploitation, although this is a problematic concept. Family labour constitutes roughly half of the labour input in cultivation.

In the dry area we sometimes meet with what seems to be a survival of an old custom, namely, *exchange of labour*. Here family labour is reciprocally exchanged between different households. Since it is rare, and since in fact it is *family* labour which is exchanged, it has been treated as equivalent to such labour in the computation of labour inputs.

The other main form of labour is hired. There are several sub-types of this form. One such is casual labour hired by the day, or *atha coolie*. In terms of volume it is the most frequent form, common both in the wet and the dry area. Even small cultivators hire coolies for operations which require, are facilitated, or speeded up by the co-operation of many labourers, such as ploughing, transplantation, harvesting and threshing.

In the wet area *kothu* or contract gang-labour is nearly as common as coolie. Kothu is a kind of collective piece-rate system which is contracted between a cultivator who needs a task to be quickly done, and a gang-leader (*kothukarar*). Payment is for the whole operation, and it is generally shared equally between the members of the gang. There are also specialists of various sorts who are paid daily wages: sprayer operators, banana planters, etc.

Bigger cultivators employ farm servants (*panneial*) on yearly contracts. These should in the main be seen as replacements for family labour: they perform tasks which on smaller farms are performed by family labour. Rates and forms of payment vary. In the dry area *panneials* are often bonded labourers, indebted to their masters. Shepherds (old men and women and children) are also employed by the year.

Seasonal contracts are entered into with crop watchmen (*kavalkaran*), watermen (*nirpaichi*) and others. They usually work for several cultivators, and receive a minor share in the harvest as payment. This is also partly a relic of an earlier collective economy. Allocation of *nirpaichies* to various fields is done by a collective of *nanjei*-holders, dominated by the bigger landowners.

Customary forms of payment survive for services rendered by carpenters and blacksmiths (for repair and maintenance of ploughs). Payment is in kind and according to customary rates. This is called *sudanthiram*. It involves also barbers, washermen and priests.

Some Relations of Circulation

There is a fair degree of commercialisation, both in the sense that inputs are to a certain extent commoditised, and so is consumption. Many cultivators also sell at least part of their output.

Merchant's capital is most exploitative when it combines with usurer's capital in giving production loans to peasants, appropriating surplus labour through the hidden interest charged as a reduction in price. We have not been able to document these relations with any degree of precision, but they seem to occur now and then in the wet area, for example, where small banana-growers have such contracts with merchants. But merchants also give loans free of

interest and without any deduction in price, against only a promise of delivery. Here the primary function of the loan seems to be to secure supply in a competitive market. Merchants' exploitative activities also surface in our price statistics where there is a systematic tendency for smaller cultivators to receive a lower price than the big ones, a phenomenon which probably cannot wholly be explained by differences in quality, but seems to be due also to the different bargaining positions of small and big sellers *vis-à-vis* the merchants.

Credit

Usurious capital is a notorious form of exploitation in the Indian context. Therefore it is significant that private usurer's capital has been replaced to a certain extent by official credit institutions (nationalised banks and credit co-operatives), especially for agricultural investment. Of the total volume of credit, official institutions account for about 54 per cent. These loans carry a lower rate of interest, around 13 per cent, against the 20 to 40 per cent charged on private loans. [*Athreya et al., 1985*].

The rate of default on bank and co-operative loans has been very high, and it reached drastic proportions in 1979/80 with boycotts started by the so-called farmers' agitation. This movement had a background in ecological crisis with successive monsoon failures and many wells turning dry on the one hand, and the sharp decline in agricultural prices *vis-à-vis* industrial prices on the other. The non-recovery of the loans means that huge amounts have been practically given away.

Sometimes the funds have been misappropriated, but much money has gone into the financing of the expansion of well irrigation. In this way even these privately owned irrigation works are in a way a form of state capital, but – like the large-scale irrigation works – appropriation is private.

Non-Agriculture

A few words must be said about the relation between agriculture and the non-agricultural sectors of the local economy.

We have sampled only that part of the local population which is *in some way* (as workers, cultivators, or owners) related to agriculture. Around ten per cent of the population is thus left out of the sampling frame.

A considerable part of the remaining 90 per cent are 'straddling', that is, they are involved in both the agrarian and non-agrarian sectors of the economy. In fact, 76 per cent of the sampled population is primarily engaged in agriculture (deriving more than half of their income therefrom), a proportion which varies from class to class.

In this study we have chosen to analyse *only* the agricultural part of the household economies, but, as we shall see, this can turn into a trap since the two sectors of the household economy are integrated and mutually influence each other. This increases the difficulties in extracting the *agrarian* class structure.

V. MORE ON THE CONCEPT OF AGRARIAN CLASS

We will quote a standard definition of the agrarian classes from Lenin's 'Draft theses on the agrarian question' [1966]. These (hurriedly?) drafted definitions are still widely in use, although it can be shown that they do not deal with a number of important issues in the agrarian class analysis.

We will first discuss Lenin's definition of four peasant classes. We exclude for the time being his 'big landowners'. We also exclude his 'agricultural proletariat', since it is unproblematical from a definitional point of view.

> *Semi-proletarians* or peasant who till tiny plots of land, that is, those who obtain their livelihood partly as wage-labourers in agricultural and capitalist enterprises and partly by working their own or rented land, which provide their families only with part of their subsistence.
>
> *Small peasantry,* that is, the small-scale tillers who, either as owners or as tenants, hold small plots of land which enable them to satisfy the needs of their families and their farms, and who do not hire outside labour.
>
> *Middle peasantry:* small farmers who (1) either as owners or as tenants hold plots of land that are also small but under capitalism are sufficient not only to provide, as a general rule, a meagre subsistence and the bare minimum needed to maintain their farm, but also produce a surplus which in good years may be converted into capital; (2) quite frequently resort to employment of hired labour.
>
> *Big peasants* (Grossbauern) are capitalist entrepreneurs in agriculture, who as a rule employ several hired labourers and are connected with the peasantry only in their low cultural level, habits of life, and the manual labour they themselves perform on their farms [1966: 153 f].

A close reading of this text shows that Lenin uses six or seven different criteria for classification here. We will discuss each of them in order to sort out what is useful for our purposes.

The Area Criterion

For some of the classes an unspecified area measure of their holding is given, but the terms are very vague: *tiny* plots (for semi-proletarians), *small* plots (for the small and middle peasantry). By implication, big peasants would have *big* holdings. Obviously, this criterion is not useful at all, except as a very crude approximation.

A more precise specification of the area held by the different classes presupposes two things:

(1) It presupposes a homogeneity in the productive potential of the land which is unrealistic. In our case it can be illustrated with the difference between an ordinary acre of rainfed land, capable of yielding a few

hundred kg. of millets, and the best irrigated land in the wet area where more than 2,000 kg. of paddy can be reaped. The difference is reflected in land prices, with a few hundred rupees per acre for *punjei* lands, and several tens of thousands paid for the best *nanjei* in the wet area. With commercialisation the heterogeneity of land increases further, since the value of crops are so different. On good *nanjei,* for example, paddy can be cultivated at an average cost of below 1,000 rupees, or bananas can be planted with an investment of around 3,000 rupees. The most intensive crop that we have met with, betel-vine, involves costs which are several times those of banana. Betel-vine is grown only on fractions of an acre, however; but all the same, *with some degree of commercialisation, area loses its usefulness as a measure of economic scale.*

(2) Even if we could assume homogeneity in land, the area criterion would not be an independent criterion of class, since it presupposes some other criterion which can be used to fix the area boundaries between classes. Take a statement like the following: 'Peasants cultivating less than x acres of (homogeneous) land are poor peasants.' The statement builds not only on the area criterion, but also on an unstated criterion which has been used to ascertain the class status of peasants cultivating less than x acres, and to establish that peasants holding more than x acres are not poor peasants.

A similar comment could be made about Nemchinov's index, as referred by Shanin [1980]. It is a weighted sum of all lands and all means of production owned or leased by a household, where their cash values have been used as weights. By means of weighting, this index takes account of the heterogeneity in land; by the same means tenurial data can be incorporated into the index; and so can data on ownership and leasing of means of production. But Nemchinov's index is not an independent index of class; it presupposes another criterion which can be used for validating the weight system.

Tenurial Status

For the three first classes, Lenin explicitly states that they may work own or rented land, and presumably it would be true by implication also for the fourth class, the big peasants. That is, for the identification of these classes, *tenurial status is a non-criterion.* Lenin's use of this criterion conveys only one piece of information albeit an important one: that the class status of a peasant cannot normally be ascertained from tenurial data. Owner-cultivators and tenants are not discrete classes.

It is possible, though, to imagine an agrarian economy where owners and tenants are in fact discrete classes. But even in such an economy, tenurial status would not be an independent criterion of class. On the contrary, we would have to perform a class analysis by means of some other criterion (or criteria) of class, which would establish that categories of owners and tenants are coterminous with two classes.

Relation to Agricultural Labour Market

Partly implicitly, Lenin works with two criteria which we will treat under one heading, namely (1) if the peasant works as a wage-labourer, and (2) if he employs wage-labour on his own farm. The two criteria are used in the following way to distinguish between the classes:

TABLE 1

DEFINITION OF PEASANT CLASSES BASED ON THEIR RELATION TO THE LABOUR MARKET

Class	Relation to labour market	
	Hires out	Hires in
Semi-proletarians	Yes	(no)
Small peasantry	(no)	no
Middle peasantry	(no)	yes
Big peasantry	(no)	yes

In the above table, we have bracketed the relation to the labour market in those cases where the relation is not explicitly stated by Lenin, but where the implicit relation is none the less clear.

Note that these criteria are used to distinguish only between three classes. The middle and big peasantry have a similar relation to the labour market, so that some other criterion is needed in order to distinguish between them. Otherwise, the relation to the labour market is a robust criterion which would be easy to use, and data would be easy to get.

Unfortunately, Lenin did not foresee one complication which is acute in the Indian case: his assumption is that peasants *either hire in or hire out,* while in India most peasants do both. This complication has to be confronted if this criterion is to be made useful. Later in this study we will discuss in detail an attempt to overcome this hurdle by taking *net labour hired-in* as a criterion.

Reproduction of the family and the farm

Lenin says about the semi-proletarians that their farms can 'provide their families only with part of their subsistence', while the small peasantry 'satisfy the needs of their families and their farms'. The middle peasantry also gain a 'meagre subsistence' and 'the bare minimum needed to maintain their farm'.

Thus, family and farm reproduction is used in the following way to distinguish between the four peasant classes:

TABLE 2A

DEFINITION OF PEASANT CLASSES BASED ON REPRODUCTION

Class	Attains reproduction of	
	Family	Farm
Semi-proletarians	Partly	?
Small peasantry	Fully	Fully
Middle peasantry	Fully	Fully
Big peasantry	Fully	Fully

Like the previous criterion, the present one only operates at some levels: more precisely in establishing the border between the semi-proletarians and the small peasantry.

But in the definition of the middle peasantry another criterion is introduced which is closely related to family and farm reproduction: the middle peasant farm provides, 'as a general rule, a meagre subsistence and the bare minimum needed to maintain the farm, *but also produces a surplus which in good years may be converted into capital'* [loc.cit., our emphasis]. The term 'surplus' as it is used here, must be taken to mean *surplus over the needs of family and farm reproduction.* Thus, we could have put a third column in the previous table, reading as follows:

TABLE 2B

DEFINITION OF PEASANT CLASSES BASED ON REPRODUCTION

Class	Attains surplus
Semi-proletarians	no
Small peasantry	no
Middle peasantry	yes
Big peasantry	(yes)

The 'yes' in the last row would be true by implication. Thus the combined criterion of family and farm reproduction and surplus operates to establish the borders between the three first classes. Like the previous criterion – the relation to the labour market – this criterion distinguishes only between three

classes: it does not differentiate between middle and big peasants.

One way to interpret Lenin would be to say that the surplus which the big peasants attain is both regular and substantial, unlike that of the middle peasantry. Thus, the regularity of the surplus could be taken to distinguish between middle and big peasants. But this criterion is not useful in our case, since our data only cover a single year. Therefore, we will propose another way of distinguishing between middle and big (or rich) peasants which, moreover, seems more theoretically relevant.

Like the relation to the labour market, the present criterion, or *the surplus criterion* as we will call it, is a robust one, given adequate data. Before it can be used, however, the terms used would need to be defined. If we take 'surplus' to be defined negatively by the needs of family and farm reproduction, as argued above, these latter needs have to be defined.

To avoid misunderstanding, it should be pointed out at once that 'surplus' does not refer to surplus *value*. In the following we use 'surplus' as synonymous to *surplus appropriated* by individual households, that is, on the one hand, on a micro-level, and, on the other, with a focus on *distribution,* rather than *production* of surplus.

By definition, surplus is what is available, either for luxury consumption or for accumulation, once the requirements for simple reproduction have been met. Simple reproduction involves on the one hand reproduction of labour power, and reproduction of the means of production on the other. If the surplus is to be identified, we must be able to distinguish between necessary consumption and luxury. Thus, we must identify *a level of subsistence* which can serve as a demarcation line. Consumption above this level would by implication be luxury (non-basic) consumption which, symbolically speaking, means eating of the surplus, a drain on investible resources.

The level of subsistence is not at biological concept. On the contrary, it denotes the level of consumption of the producers, of the ordinary working members of a society. As such, it is an *historical* and *cultural* fact.

The definition of family and farm reproduction must take account of the level of commoditisation, to use the term coined by Bernstein [1982]. An agrarian economy is at a low level of commoditisation when the reproduction of the farm and of the family involves the consumption of few commodities. In such cases reproduction occurs through non-commodity circuits: it can be family labour working on raw materials and with means of production that are home-produced, or it can be labour and means of production obtained through non-market networks of exchange like, for example, the Indian *jajmani* system. But we must reckon with a considerable level of commoditisation, both of family and of farm reproduction. An ordinary South Indian household budget contains a number of items that could be home-produced (grain, milk, vegetables, fruits, etc.), but it also contains a number of industrial commodities (cloth, kerosene, oil, tobacco products, etc.). The same is true about means of production and raw materials: seeds, ploughs, fertilisers, pesticides, etc. The so-called green revolution has increased the level of commoditisation by breaking down non-commodity forms of reproduction:

fertilisers and pesticides have become necessities to production; seeds now have to be renewed every two or three years, since the new varieties are not genetically stable.

At the same time, the agrarian economy retains important non-commodity features. In fact, we cannot think of a completely commoditised peasant economy, because in such an economy there would be no peasants. We would have only capitalist farms, where all labour is wage labour (that is, labour in commodity form). A peasant farm is by definition only partially commoditised: at least some labour and probably also some means of production are 'non-commodities'. The essential element here is labour because we can hardly conceive of a non-working peasant. By definition he and/or his family members must be seen as toiling in his or, for that matter, somebody else's fields.

Expressed metaphorically, peasants stand with one leg in the market economy, and the other outside, in a 'non-commoditised' economy. They cannot retreat completely from the market because the commoditised elements of reproduction have become *necessities* to life and to production. The organisation and skills needed for a life outside the market are long since extinct (cf. Bernstein [1982]). Neither can they go in the other direction and step inside the market with both legs; if they do so they cease to be peasants, either in the sense hinted at above, of being converted into capitalist farmers, or because they cannot reproduce inside the market: in other words, the *non-commoditised parts of their economy are also necessities* – necessary for reproduction. Again, the essential element is labour: peasant farms are viable units in a market economy only thanks to labour in 'non-wage' form (usually family labour).

We claim then, that, to be useful, a surplus criterion of class must take account of this essential characteristic of peasant farming, of being at an intermediate level of commoditisation. Our own surplus criterion attempts to fulfil this requirement (see section VI).

This also implies that we must use a method of accounting which is compatible with the intermediate level of commoditisation. First of all, we must be careful with shadow pricing, since shadow prices carry with them the assumption of complete commoditisation. To the extent that it is practicable, we must adopt a system of 'double accounting' where market transactions in cash and in kind are treated according to their specificity.

After this digression, let us return to Lenin. The criteria that we have discussed have this in common: they only distinguish between three peasant classes: semi-proletarians, small, and middle peasants. The distinction between middle and big peasants seems difficult to make in terms of these criteria.

Participation in Production

But what we have just said about the necessity of non-commodity forms of labour, especially of family labour, to peasant reproduction, opens a

possibility of distinguishing between middle and big peasants. Both produce a surplus, as we have seen, but that of the middle peasant is small and irregular. One way to look at this surplus is to see it as being produced only thanks to the participation of family labour in production, that is, thanks to the non-commoditised features of the farm economy. The big and regular surplus of the big peasants, however, could be thought of as being produced even without their own participation in manual labour. If that were the case, their participation would not be necessary to their surplus production.

If we adopt this interpretation, it makes sense when Lenin says that the *big peasants are capitalist entrepreneurs.* The surplus which they produce, then, is *profit* on capital invested in agricultural production. Their profit can of course be augmented if they participate in production and save on wage expenses. In other words, they can exploit their own labour in addition to the hired labourers which they employ. The surplus of the middle peasants, on the other hand, would be of an entirely different kind: if their participation in manual labour is necessary to surplus production, their surplus would stem mainly from self-exploitation.[1] If extended in this direction, the surplus criterion of class makes it possible to distinguish between four peasant classes. Its discriminatory power would be one better than criterion operating in relation to labour market.

Cultural and Ideological Criteria

If participation in production is not necessary to the surplus production of the big peasants, why do they participate at all? The answer seems to lie in the cultural, ideological criterion which Lenin resorts to in the definition of the big peasants: they are 'connected with the peasantry *only* in their low cultural level, habits of life' [our emphasis]. This sentence cannot be understood without thinking of the specifically Russian setting: a feudal past where the main contradiction was between the peasantry and the nobility. The feudal superstructure long survived the feudal mode of production, and determined political alignments also in the Russian revolution. What Lenin says, is that *economically* the big peasantry belongs to the exploiters, but ideologically they identify with the peasantry. Politically they are likely to align with the peasants against the nobility, as in fact they did in the spontaneous land reform which followed the power vacuum created in the Russian countryside by the city-based revolution and the smashing of the tsarist state.

Big landowners on the other hand are defined as follows:

> *Big landowners* who in capitalist countries – directly or through their tenant farmers – exploit wage labour and the neighbouring small (and in some cases middle) peasantry, do not themselves participate in manual labour, and are in the main descended from the feudal lords, or rich financial magnates or else a mixture of both these categories of exploiters and parasites [loc. cit.].

It is assumed by Lenin that the landlords are descended from the feudal

lords, or that they are rich financial magnates. A peasant turned landlord has no place in this schema, although he would be possible in an agrarian economy with considerable mobility in the ownership structure. He is certainly a possibility in an Indian context where room for him has been created by the many old landlords who have left agriculture under the threat of land reform, attracted by the opportunities of an expanding state apparatus and industrial development.

A mixed mode of operation, both capitalist and landlord, is hinted at by Lenin, and would also belong under the sixth category. The big landowners, then, would contain two or three different classes.

Primary and Secondary Relations of Exploitation

Before going into the classification exercise, we will try to demonstrate that there are no a priori grounds for expecting that two criteria of class would necessarily give the same result if they work on (1) participation data (hiring-in, hiring-out, participation by own labour in production) and (2) reproduction (of farm and family) versus surplus.

The first type of criterion works with, what we call, *primary relations of exploitation,* that is, exploitation of labour in the process of production. In our area, as we have seen, such labour can be own (family) labour, or exchange labour, or it can be hired (casual, contract, permanent). The surplus produced by this labour is, of course, in the first instance, appropriated by the cultivator (whether he be owner or tenant). But there is no guarantee that he will be able to keep the surplus thus appropriated, because *secondary relations of exploitation* may be superimposed on the primary ones. The effect of the secondary relations may be that the entire surplus is alienated from the cultivator. Then we would have a case of non-coincidence between the criterion based on participation (according to which our cultivator is an exploiter, appropriating the labour of others); and the second criterion according to which he would not be an exploiter, because he appropriates no surplus over his needs for familial and farm reproduction, since the surplus is alienated from him.

What are these secondary relations of exploitation? One has already been hinted at, namely (1) *the rent relation.* Another relation is (2) *usury,* where moneylenders squeeze the whole or parts of their surplus from peasant debtors. A third one is (3) *commercial exploitation* where merchants, often also operating as moneylenders, exploit peasant producers.

There is a fourth relation which also belongs here, although it is not a relation of exploitation in the strict sense of the term. This is (4) the *redistribution of surplus* which occurs *via the price system.* In a system where the producers exchange their products (including their surplus product) for money in the market, and where they acquire their means of subsistence and production with the same money on the same market (the C–M–C–circuit in Marxist terms), we can very well think of a situation where the money earned by selling own products suffices only for satisfying simple reproduction needs,

and where there is no surplus for conversion to capital, although such a surplus was in the first instance appropriated via the primary relations of exploitation. In such a case, the surplus produced on the farm would be appropriated in the last instance by somebody else operating on the market, but from a more advantageous position.

Our results indicate that this could be the case in our area.

VI. A SURPLUS CRITERION OF CLASS

We will adopt a criterion of class based on the reproduction of the family and the farm. We will try to overcome some of the difficulties identified when dealing with Lenin's 'draft theses'. The following is an extension and hopefully also a refinement of the approach developed by Djurfeldt and Lindberg in an earlier study [1975a: Ch.5].

The first step in developing a surplus criterion of class – as we call it for short – is to identify the level of subsistence in our area. Moreover, subsistence must be defined partly in kind, and partly in cash, since we are dealing with a partially commoditised economy. Subsistence must also be defined in terms of consumption units. Only then can the demographic composition of the peasant household be taken into account.

Subsistence Rations of Grain

A subsistence basket contains one portion which is home-produced or which at least *could be* home-produced. Here we have grain, milk, vegetables, fruits, etc. But the basket also contains a portion of *commodities,* such as oil, kerosene, clothes, medical services, etc.

From the first category, we will consider only grain, since the labouring population does not consume much milk, vegetables, and fruits, and since what is consumed of these items is usually bought. Our data indicate that landless labourers and poor peasants only occassionally own milch animals, fruit trees, and vegetable gardens.

We asked our respondents how much grain (that is, rice and coarse grains) they cook in a day or consume over a year. Expressed per consumption unit,[2] people claim to consume on an average around 220 kg. of grain a year. In the dry area, the mean is even somewhat higher, around 225 kg., but since they consume more coarse grain in this area, and since we have not deducted the husk content, which varies for different types of coarse grain, but which can be taken to be around ten per cent in our case, 220 kg. can be taken as the mean level of consumption also for the dry area.

This is the equivalent of 600 grammes a day for an adult consumer. A nutritionist might consider this to be on the high side (cf. Djurfeldt and Lindberg [1975b:72 ff.]). There may also be a tendency on the part of our respondents to overstate their level of consumption. But the general knowledge about the actual grain consumption in India is weak, as is evident from the recent discussions about poverty and its prevalence. (See, for

example, Achaya [1982], Tyagi [1982], and Kulkarni and Asok [1982].) Thus, we find no reason to discard the level of consumption reported by our respondents; we will take 600 grammes per day and per consumption unit as the accepted level of subsistence. This gives around 2,200 calories a day. According to Sukhatme [1970], it would be possible to subsist *only* on this food intake without serious risk of malnutrition. Therefore, 220 kg. of grain can be taken to define a biological minimum, since a food intake below this line involves health hazards [cf. *Kulkarni and Asok,* 1982].

As already indicated, the pattern of grain consumption is quite different in our two areas. In the wet area, where paddy is the only important grain crop, they eat very little coarse grain. What little people eat is bought, presumably in the off-season, when stocks of paddy are exhausted, and cash reserves are meagre. In the dry area, the staple food is *kumbu* and *solam* and smaller quantities of other coarse grain. Rice is not consumed daily.

The price level is different for the two types of grain. The price statistics that we collected, at the weekly markets in Pettavaithalei (wet area) and Manaparei, and occassionally also from the village grocers, indicate an average price of 2.10 per kg. for rice during the reference year, and of 1.15 for *kumbu* and *solam.*

TABLE 3

SUBSISTENCE OF RATIONS OF GRAIN

Area	Total per C.U. kgs.	Proportion of: Rice	Coarce grain	Total cash value
Wet area	220	.85	.15	431
Dry area	220	.33	.67	322

Defining Poor Peasants or Semi-Proletarians

Now, if we define those farms which are so small that they cannot provide the farmer's family even with its grain requirement, as poor peasants or semi-proletarians, we will get two groups,the landless labourers and the semi-proletarians, which together would make up more than a majority of the working population. We call this group the rural proletariat, although it is not fully proletarianised.

A poor peasant or semi-proletarian, then, is one where the following conditions hold:

$$A > L \text{ and } Y < K \qquad (1)$$

(The symbols used above are defined in Table 4)

TABLE 4

OVERVIEW OF SYMBOLS AND VARIABLES USED IN SURPLUS CRITERION OF CLASS

Symbol	Variable
Y	Gross income from marketing of farm produce
A	Grain requirement of the household
B	Cash costs for production (including depreciation and maintenance of means of production, and debt service)
C	Cash required to meet non-grain consumption needs
D	Wage equivalent of family labour days
S	Surplus
Additional variables	
PA	Cash value of grain requirement (A)
L	Net income of grain from the farm (taken net of kind payments, seed, and sales if any)
K	Cash value of grain deficit (i.e. the value of A-L)

The rationale for this definition is as follows: in an overwhelming majority of cases the group thus defined is involved in grain cultivation for own use (that is, $L > 0$). Cultivation exclusively for sale is a rarity, if we do not include distress sale of grain which occurs now and then.[3]

The group thus delineated is forced to seek additional incomes both to cover their grain deficit (K) and to earn the cash needed for farm expenses (B), and for non-grain consumption (C). They are a proletarian group since they are practically always constrained to work as wage labourers in agriculture and, when employment is available, in other branches.

In the dry area, non-agricultural activities are important. The rural proletariat is involved in gem-cutting, quarrying,and wood-cutting. In the wet area we have a more specialised agrarian proletariat: non-agrarian sources of income are of marginal importance.

Level of Subsistence of the Rural Proletariat

We cannot abstract from the non-agricultural sources of income when defining the subsistence level of the rural proletariat, since, especially in the dry area, subsistence is attained only thanks to these sources of income.

As can be seen from Table 5 below, agricultural labourers and poor peasants attain a level of subsistence which is higher than what was expected, at least by these authors. In our first approaches to classification, we worked with a level of subsistence where C was defined as only 20 per cent of the biological minimum set by the grain requirement (A).

TABLE 5

MEAN INCOMES FOR RURAL PROLETARIAN HOUSEHOLDS, BY SOURCE AND FORM

		WET AREA		DRY AREA	
		Agri lab.	Poor peasants	Agri lab.	Poor peasants
	Agricultural income				
1.1	In kind				
	Wages and own produce of grain, kgs. (L)	577	900	632	681
1.2	Grain deficit (A-L)	378	289	296	492
1.3	Cash value of grain deficit, rupees (K) 1)	453	347	355	590
1.4	Cash wages from agriculture, rupees	1030	1458	530	346
2.	Non-agricultural income rupees	612	200	866	1120
3.	Total cash income from all sources, rupees 2)	1686	1333	1217	1103
4.	Cash available for non-grain consumption, rupees (C)	1233	1001	891	515
5.	Cash available for non grain consumption as a proportion of the cash value of the grain requirement (C/PA)	0.92	0.59	0.93	0.46

Notes: (1) The grain deficit has been evaluated at the consumer price for coarse grain.
(2) Note that poor peasants have to pay their production costs from their non-farm incomes, since their income from marketing is marginal. These costs have been deducted here, so that total income is net of production costs in their case.

The results in Table 5 underline the importance of working with a cultural and historical conception of subsistence. Obviously, the rural proletariat in our area has managed to attain a level of living which is somewhat above the one met with in other Indian cases. If we take the level of living attained by agricultural labourers as defining our variable C, the latter can be conservatively set to 85 per cent of the cash value of A (See Table 5). In terms of cash this means that we set the subsistence level per consumption unit as 797 rupees in the wet area, and 596 rupees in the dry area. This can be compared with the official poverty line which is close to 800 rupees in 1979 prices.[4] It is

also interesting to note that the poor peasants do not seem to reach the level of subsistence attained by the agricultural labourers.

Surplus Due to Self-Exploitation?

In terms of our notation we might define surplus as:

$$S = Y - (K + B + C) \quad (2)$$

That is, surplus could be defined as the income from marketing of farm produce (Y) net of (K) the grain deficit,and (B) the cash costs for production and (C) the cash needed for non-grain consumption.

Defined in this way, surplus is tailored to the analysis of a peasant farm economy. It recognises the fundamental fact that the production and consumption units are merged into one unit, the farm-household. Thus,the reproduction of family labour is counted as a part of the reproduction of the farm. This is another 'Chayanovian' feature of the approach adopted here.

On the other hand, we abstract from non-farm sources of income in defining the surplus criterion. We do so, not because we regard non-farm activities as unimportant – which would be counter-factual – but because farm and non-farm activites must be abstractly torn apart if we want to see how they fit together.

As it stands, formula (2) entails that surplus exists only when means of production and labour have been reproduced. But this surplus could be the result both of exploitation of hired labour and of own family labour.

The concept of peasant reproduction that we outlined above entails that a peasant household is one which reproduces itself, and maybe also appropriates some surplus through a combination of market and non-market forms of reproduction. In keeping with this, we must try to distinguish between surplus due to self-exploitation and surplus proper.

Those who appropriate surplus from other labour than self-exploitation should be able to replace family labour with hired labour. This will be the basis for distinguishing them from those who appropriate surplus only as long as they participate in production. This is our rationale for defining (D), the wage equivalent of the family labour days. This might be an alternative to those approaches to classification which take the mere fact of physical participation as distinguishing rich peasants from landlords, irrespective of whether this participation is necesssary or not.

Thus, our definition of surplus will not be that of formula (2), but:

$$S = Y - (K + B + C + D) \quad (3)$$

We evaluate (D) by finding out what it would cost to substitute hired labour for family labour.

Female family labour is substitutable by female casual labour. The women of peasant households work alongside hired women in tasks of weeding, transplantation, harvesting, and application of farmyard manure, etc. Thus, the wage equivalent of women family labour can be taken as equivalent to the

prevalent wage rate for female coolies.

Male family labour cannot be readily substituted by casual workers. The male labourers of the household, in addition to working alongside hired workers, also perform a number of tasks for which coolies are not hired: most important, irrigation and crop watching. In such tasks, family labour can be replaced by *panneial* (farm servants) or by *Kavalkaran* or *Nirpaichi* (watchmen and watermen). Panneials also supervise casual labourers. We will take the wage equivalent of up to 250 man-days to be equal to the cost of hiring a panneial for a year.

The conditions of employment of panneials vary a good deal; moreover, the cash and kind portions of their wages vary systematically between the two regions – panneials in the wet area receive a greater portion of their wages in cash. Despite this variation, the cash value of their wages tends to vary around the same average in both areas, approximately 1,300 rupees per year.[5]

Reproduction of the Farm

Having defined surplus in the manner specified by formula (3) above, we have discussed all the component terms of the formula, except (B) and (Y). (B) is straighforwardly defined as all cash costs for production, including wages, inputs of seeds, fertilizers, pesticides, etc.; and the cost of maintenance of means of production (tools, ploughs, machinery, farm buildings, etc.), and the imputed depreciation of these means. (B) also includes payment of interest and amortisation on loans, irrespective of the purpose for which debts were contracted. In other words both production and consumption loans are taken as a cost of production for our peasant households. This is also in line with our principles of accounting: consumption loans are incurred to secure the reproduction of the production unit.

Kind costs of production are not taken at their opportunity cost, a method which would be alien to our method of accounting. Kind costs are accounted for in two ways: with respect to some items ,they are treated as deductions from gross yield. This is true of harvest wages which are an important item in all farm budgets; it is also true of payments in kind for various services (*sudanthiram,* see section IV); and it is true of seeds, to the extent that these are home-produced.

Other kind costs comprise mainly expenses of labour. If, for example, family labour is used for collecting farmyard manure, or for cutting green manure in the forest, this is treated as an addition to the labour input.

Our (Y) is defined as the income from marketing of farm produce. This means that payments and receipts in kind are accounted for as such, that is, seeds, harvest wages, rent and interest in kind are deducted from the gross yield. So is the farm produce kept for own consumption by the farm household. If, however, the farmers have claimed that they keep more than their subsistence requirement of grain, as defined above, we have added the market value of this grain to the actual income from marketing. In fact, wealthier households often consume more than their subsistence rations of

grain by entertaining guests and relations on a grand scale. In analytical terms, this is eating of surplus, which can be accounted for then by shadow pricing.

Payments of land rent and interest in kind are also taken as deductions from the gross yield. Here we can clearly see how the surplus criterion focuses on *surplus appropriated,* rather than *surplus produced:* the effects of *secondary* relations of exploitation like usury and landlordism are incorporated into the index. This would be one major contrast with Patnaik's index of exploitation, in the form we have given to it (see section VII below).

To the extent that the peasants are victims of *commercial exploitation,* and to the extent that surplus is redistributed in the economy *via* the price system, this is reflected in the prices paid for inputs (B) and prices received (Y). By commercial exploitation we mean the tying of peasant producers to commercial or agro-industrial capital which has been the subject of many discussions in recent years (see, for example, Goodman and Redclift [1981: Ch.3]). In our areas we find both the crude form of integration between usurer's and merchant's capital in which peasants enter into unequal delivery contracts in return for loans (see section IV), and the 'agribusiness' type of integration found in cane cultivation on contract for the sugar factory in Pettavaithalei.

Mathematical Definition of the Surplus Criterion

We have given a simple algebraic form to the surplus criterion, which can be used as a summary of the foregoing discussion. We define the surplus criterion (r) as:

$$r = i - 4 + r_i \; ; \qquad (i = 1, 2, 3, 4, 5) \qquad (4)$$

where r_i equals:

$$r_1 = 1 - \frac{K - Y}{PA} \; ; \qquad (0 \leq Y < K) \qquad (5)$$

$$r_2 = \frac{Y - K}{B} \; ; \qquad (K \leq Y < K + B) \qquad (6)$$

$$r_3 = \frac{Y - (K + B)}{C} \; ; \qquad (K + B \leq Y < K + B + C) \qquad (7)$$

$$r_4 = \frac{Y - (K + B + C)}{D} \; ; \qquad (K + B + C \leq Y < K + B + C + D) \qquad (8)$$

$$r_5 = \frac{Y - (K + B + C + D)}{(PA + C)} \; ; \qquad (K + B + C + D \leq Y) \qquad (9)$$

What is defined with r_1 to r_5 is really a number of hierarchically ordered reproductive levels. The rationale for this ordering is as follows:

Reproductive level 1: (r_1) is the one where the income from marketing (Y) is less than the food grain deficit (K). A farm at this level of reproduction does not yield an income sufficient even to cover the grain requirements of the household. This is characteristic of what we have defined as a poor or semi-

proletarian peasant above. For these households the surplus criterion takes the value $-3 \leq r < -2$.

Reproductive levels 2 and 3: (r_2 and r_3) are those where the basic grain requirement is met, but where the income from marketing (Y) does not suffice to meet (B) the cash costs for production and/or (C) the non-grain consumption requirements. For farms at these levels to be reproduced, additional sources of income are required. In these cases, then, the surplus criterion takes values between -2 and 0. There is no immediately apparent logic relating these reproductive levels to the conventional designation of peasant classes. These peasants are clearly above the semi-proletarians at level 1, and below the 'pure' middle peasants at level 4. Let us provisionally regard them as middle peasants of some sort, and await further investigation before assigning them a definite class status.

Reproductive level 4 in contradistinction to the lower levels, defines a fully reproductive farm where no additional sources of income are necessary. This is why (r) is defined so as to change sign here: $0 \leq r_4 < 1$. At this level we find the *notional middle peasant,* that is, a farmer at level 4 may appropriate surplus, but this presupposes self-exploitation, because the surplus is not big enough to allow him to retreat from production and perform only supervisory and managerial tasks. Note that, as we now define them, middle peasants always exploit their own family labour, and that this does not preclude their exploitation of hired labour. The extent to which they exploit hired labour is an empirical question.

This definition of the middle peasant differs from Patnaik's which takes zero exploitation of hired labour as defining the middle peasant (see below).

Reproductive level 5: here we find those cultivators who appropriate surplus. They may physically participate in production, or restrict themselves to supervision and management. It does not matter which is the case: their surplus primarily derives from the exploitation of hired labour. For these cultivators (r) takes values greater than 1. In order to make it possible to express the size of the surplus ($S = Y - (K + B + C + D)$) in terms of the index we have divided S by the subsistence requirements of the household ($PA + C$). This means that the size of the surplus is expressed in subsistence rations so that, for example, $r = 2$, would denote a surplus which is two times the subsistence requirements of the household.

Results

The calculation of (r), the surplus criterion for our material gives the results summarised in Figure 1. The figure builds on the main sample only; it is not representative of the whole population. Moreover, cases from different villages have been lumped together without weighting, so the figure describes only the structure of our material. Only cultivators are included, totally 168 households, out of which 21 have been excluded on account of missing data.

FIGURE 1

THE SURPLUS CRITERION: DISTRIBUTION IN MAIN SAMPLE

Reproductive level	value of (r)	no of cases (n)
1	$-3 \leq r < -2$	62
2	$-2 \leq r < -1$	41
3	$-1 \leq r < 0$	19
4	$0 \leq r < 1$	9
5	$1 \leq r$	16
Total		147

The value of (r) is given on the horizontal axis. The histogram shows the distribution of (r) with the number of cases plotted on the left vertical axis. Sixty-two cases or 42 per cent fall at reproduction level 1 in a skewed distribution with more cases at the lower end of the interval, and with few cases bordering on reproductive level 2. This means that the poor or semi-proletarian peasantry is a fairly distinct group, cultivating tiny parcels of land, often not sufficient to meet more than a fraction of their subsistence needs. Sixty-nine cases or 47 per cent have r-values between –2.00 and +0.6. Note that only nine cases fall at reproduction level 4, where we expected the 'notional middle peasants' to fall. The bulk of the middle peasants at levels 2 and 3 cultivate farms which are not fully reproductive units: they are forced to hire themselves out or seek non-agricultural sources of income. Sixteen cases or 11 per cent have $r \geq 1$, that is, they appropriate surplus more than sufficient to replace family labour with hired labour.

We will return below to the detailed results of the surplus criterion. But first we will test an alternative approach to classification.

VII. THE PARTICIPATION CRITERION

This approach has been advocated by Utsa Patnaik [1976]. We have taken the liberty of modifying her index of exploitation to a very simple form. Take all households which contribute family labour (F) to production. Here we do not include supervisory or managerial labour. We exclude those households which do not physically participate in own cultivation, that is where $F = 0$. This holds for (i) the agricultural labourers and (ii) the landlords. Both of these classes are easy to identify and define.

Our main interest at present is cultivating households participating in production. For these we will define net labour hired in/out as proposed by Patnaik:

$$H_i - H_0 \tag{7.1}$$

We thus get two sets, the net hirers-in ($H_i > H_0$) and the net hirers-out of labour ($H_i < H_0$). But a further subdivision can be made by introducing F:

$$p = \frac{H_i - H_0}{F} \tag{7.2}$$

We then get three sets which, with some legitimacy, we can call classes:

TABLE 6

THE PARTICIPATION CRITERION OF CLASS

Value of p	Class defined
$p < -1$	defines the poor peasant who works to a certain extent on his own land, but who works more for others than for himself
$-1 \leq p \leq 1$	defines the middle peasant who hires in and hires out to a certain extent but for whom the net hiring in/out is less than the amount of labour put in on the own farm
$p < 1$	defines the rich peasant who hires in a considerable amount of labour which exceeds that put in by family labour.

This index has the obvious advantage of being simple and elegant but, as is readily appreciated, it has some weaknesses: it reflects only primary relations of exploitation, that is, wage-labour and self-exploitation (family labour). Secondary relations, like land rent, usury, and commercial exploitation are not included. The incorporation of these forms into the index requires the conversion of land rent, interest, and commercial profit into labour units – a conversion attempted by Patnaik in a later publication [1980]. In the simple formulation, as we will see, the index is fraught with problems. Its extension to secondary relations of exploitation would not easily solve these problems.

The Homogeneity Postulate

The main problem with the participation index is the homogeneity which it postulates between the three types of labour, H_i, H_0, and F. More precisely, the assumption is that, for these heterogeneous forms of labour,the proportion of surplus labour to necessary labour can be taken to be the same. Only if this assumption is valid does it make sense to treat the labour types as additive.

As we have seen, there is a considerable heterogeneity in forms of labour. In section IV we described three different forms of hired labour: day labourers (*atha coolie*), contract labour gangs (*kothu*), and permanent farm servants (*panneiyal*) paid by month, season, or year. We also have labourers of different sex and age, including children, who are paid at different rates. We also have skilled and unskilled labour, where banana specialists are an example of the former group.

The participation index postulates, then, that behind this heterogeneity in form, there is a homogeneity in substance, in the productivity of different forms of labour.

(1) If this assumption can be accepted for labour hired-in and hired-out, that is, in computing $(H_i - H_0)$ we would get a *zero point* which would approximate the real dividing line between exploiters and exploited in the process of production (but still in abstraction from self-exploitation, and from secondary relations of exploitation).

(2) If, furthermore, it can be assumed that wage labour and family labour are homogeneous, then the division of $(H_i - H_0)$ by F would be legitimate, so that the resulting index(p) would give us also an estimate of the true size of the middle peasantry (that is, as estimated by the number of sample households falling in the range $(-1 \leq p \leq 1)$).

Let us discuss these two points in reverse order. On theoretical grounds, the assumption of homogeneity between family and hired labour is dubious, since it is widely recognised from the discussion of peasant economies that the input of family labour by peasants on their own holdings follows another logic than their use of hired labour.

In our attempts to use the participation index we soon found out that we had to acknowledge the heterogeneity of labour at least when it comes to livestock maintenance and irrigation.

Counted in hours, peasants often spend amounts of labour in livestock maintenance and irrigation equal to that spent on crop production as such.

But the time spent in these activities is not comparable in other respects. Livestock maintenance is an extensive use of time, as argued by Warman [1980: 124]:

> looking after livestock demands more energy than it yields, but this energy is distributed over a longer period and in units of low intensity which can be entrusted to people who cannot fully participate in labour during the critical period because they have little physical energy (such as children or old people) or who carry out other occupations at the same time (such as women).

A similar point could be made about irrigation. Labour expended in irrigation involves not only the physical labour of digging and maintaining field canals, but also time-consuming but less intensive tasks like supervising the water-flow, guarding against pilferage of water, operating the pumpset (which involves a lot of mere waiting since power supply is so erratic). For both these operations it is almost always family labour which is used. Only the richest households hire farm servants for these tasks. Coolies paid by the day are not hired for such purposes but for field labour proper. Thus we see that the heterogeneity in substance is 'recognized' in the two social forms of wage labour, namely, *coolie* and *panneiyal.*

This heterogeneity between F and H influences not the zero point, but the location of −1 and +1. Thus it has direct repercussions on the estimated size of the middle peasantry. We found that when livestock labour and irrigation work were given weights equal to field labour, it often led to absurd results: households with clear poor or rich peasant characteristics turned out as middle peasants by this index.

We collected our data in terms of labour days and with the hours of labour specified. In aggregating labour inputs we have left out the labour expended in livestock maintenance. We have thus adopted a compromise solution where irrigation work is weighted as 1 and livestock maintenance as 0. The implication of this is obviously that the −1 and +1 points on our scale are somewhat arbitrary and so is the estimate of the size of the middle peasantry.

A preliminary conclusion, then, is that the participation index does not allow for any precise identification of the middle peasantry.[6] But the critisism raised above does not automatically apply to the computation of net labour hired-in ($H_i - H_0$), so let us now turn to a discussion of this magnitude.

To the extent that the labour market is a form of exchange of labour between petty producers, [cf. *Djurfeldt and Lindberg,* 1975a: 127ff,], there could be at least an aggregate homogeneity between hired-in and hired-out labour. But a considerable part of all hiring-in is by rich peasants and capitalist farmers. To the extent that these farms, as distinct from those of the petty producers, are operated on a capitalist basis there would be important heterogeneity between the labour hired by the different classes. But since the aim of calculating net labour hired-in is to find an approximation to the

dividing line between exploiters and exploited, this heterogeneity would not influence the zero point of the scale.

Our second preliminary conclusion, then, is that net labour hired-in may be more useful than the participation index. But it should be used with care, because we have also found another major limitation in the usefulness of data on labour use: in households with non-agricultural sources of income,like business, jobs outside agriculture, etc., the pattern of labour use in agriculture often deviates from the one expected. Such households often substitute hired labour for family labour, so that the input of family labour into farming becomes lower than what could be expected from their resource position, and so that their net labour hired-in becomes higher than expected. Since a considerable proportion of households in our sample, especially in the dry area (see section IV), combine agricultural and non-agicultural sources of income, this introduces another bias into an index based on labour use. Fortunately, not all households are involved in this combination of trades, so that, in principle, it should be possible to isolate the effects of this factor.

Results

In Figure 2 we have brought out the distribution of (p), the participation criterion among the cultivators in the main sample.It strikes the eye that 59 cases, that is, 38 per cent of the material, have $p > 1$: that is, they have a pattern of labour use which indicates rich peasant status. In contrast to this, only 16 cases have $r > 1$: that is, are assigned rich peasant status by the surplus criterion. As a mirror effect of this, the poor peasantry according to the participation criterion ($p < -1$) is smaller than its counterpart according to the surplus criterion. The middle peasantry is also smaller as measured by (p) (46 cases, or about 30 per cent), than as measured by (r) (47 per cent). We have already concluded that (p) should be taken with a pinch of salt in this respect: its delineation of the middle peasantry is subject to doubt. Therefore, it is more interesting to look at the zero point of the two scales.

Eighty-eight cases or 57 per cent of the material are net exploiters according to (p), while only 22 cases, or about 15 per cent are above zero according to the surplus criterion. This is a major discrepancy between the two indices which we must go into more deeply.

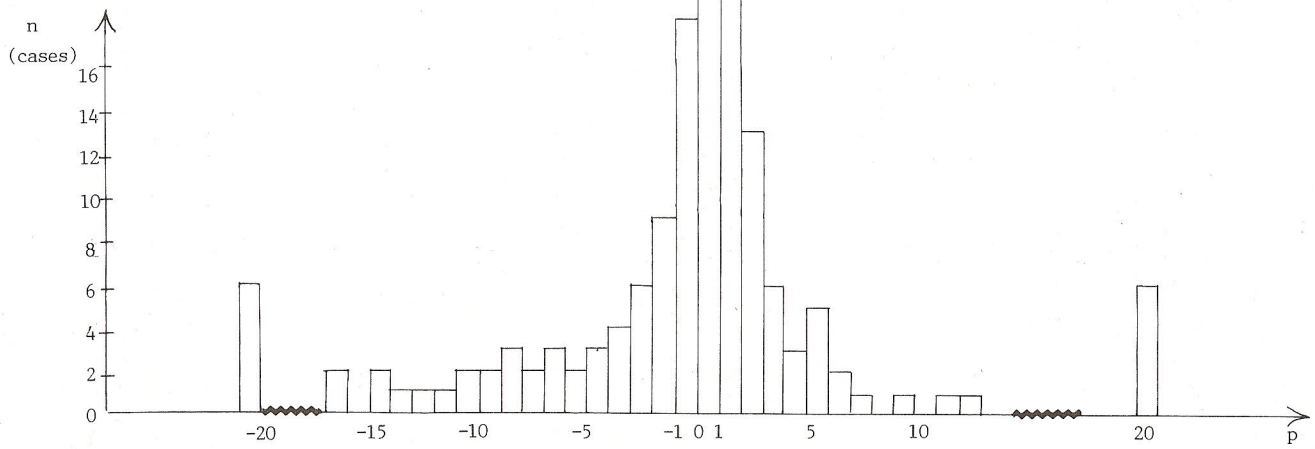
VIII. RELATIONS BETWEEN THE TWO CRITERIA OF CLASS

In Diagram 1 we reproduce a scattergram giving the values for all cases in the main sample on the two classification indices.[7] The diagram should be read as follows: at the head of the diagram we have put the reproductive levels (i) ranging from $i = 1$ to $i = 5$ as the surplus criterion (plotted on the x-axis) increases from -3 to $+2$, which is the maximum value plotted. The line running across the diagram separates net hirers-in of labour ($p > 0$) from net hirers-out ($p < 0$). Using the least square method, we have also fitted a straight line to the data in Diagram 1. Under the assumption of a linear relationship

FIGURE 2

THE PARTICIPATION INDEX (p): DISTRIBUTION IN MAIN SAMPLE

Participation index	no. of cases (n)
$p < -1$	49
$-1 \leq p \leq 1$	46
$p \leq 1$	59
Total	154



between the two criteria of class, the fitted line gives one the estimate of (p) for a given value of (r).

Analysing the scattergram, we first note the far from perfect correlation between the two criteria. Pearson's correlation coefficient is only .44 which is a poor correlation between two variables if they are supposed to tap the same dimension.[8] The correlation improves somewhat if we remove those cases where, in a manual classification, the participation criterion was judged to be distorted, for example, by non-agricultural activities engaged in by members of the household. When 42 such cases are removed, the correlation improves from .44 to .60. In other words, even if we exclude those cases where (p) is a poor indictor of class, (p) explains only $r^2 = .36$, or 36 per cent of the variation in (r).[9]

The theoretical interpretation of this could be that, *for a given level of reproduction* (as measured by (r)), *there is a wide variation in patterns of labour use* (as measured by (p)), ranging from negative to positive values of (p) for almost any value of (r), except the highest ones ($r > 1$). The variations in labour use are due to a host of factors like crop patterns, efficiency of management, demographic composition of the household, overall economic activities engaged in by members of the household, attitudes to work etc. These variations are another reason why the pattern of labour use, as measured by (p), the participation index, is far from perfect as an indicator of class.

In giving the expected value of (p) for a given value (r), the fitted line abstracts, as it were, from the wide variations in patterns of labour use, bringing out the central tendency at each level of reproduction. As can be seen from the figure, the line $p = 1.82 + 1.75\,r$ crosses the horizontal axis somewhat below reproduction level 3 ($p = 0$; $r = -1.04$.) This means that farmers above $r = -1.04$ have an expected value of $p > 0$.

Interestingly enough, the systematic discrepancy between the two criteria of class remains when we remove the above-mentioned 42 cases where participation was judged to be distorted. As we noted above, the correlation improves, but the fitted line changes very little: ($p' = 1.72 + 2.27r'$). The slope ($\alpha = 2.27$) changes, but not the intercept ($\beta = 1.72$).

We have not been able to detect any intervening or underlying factors which could invalidate the above result; but it should be stressed that, although the tendency for the sample seems very clear, it does not permit statistical generalisation. This is mainly because the variance in (p) is very high with a standard deviance of $s = 18.00$ for the sample. On the other hand, it can be established at the five per cent level that the population estimate for the proportion of exploiters according to (r), ten per cent, differs significantly, from that according to (p), which is 40 per cent.[10]

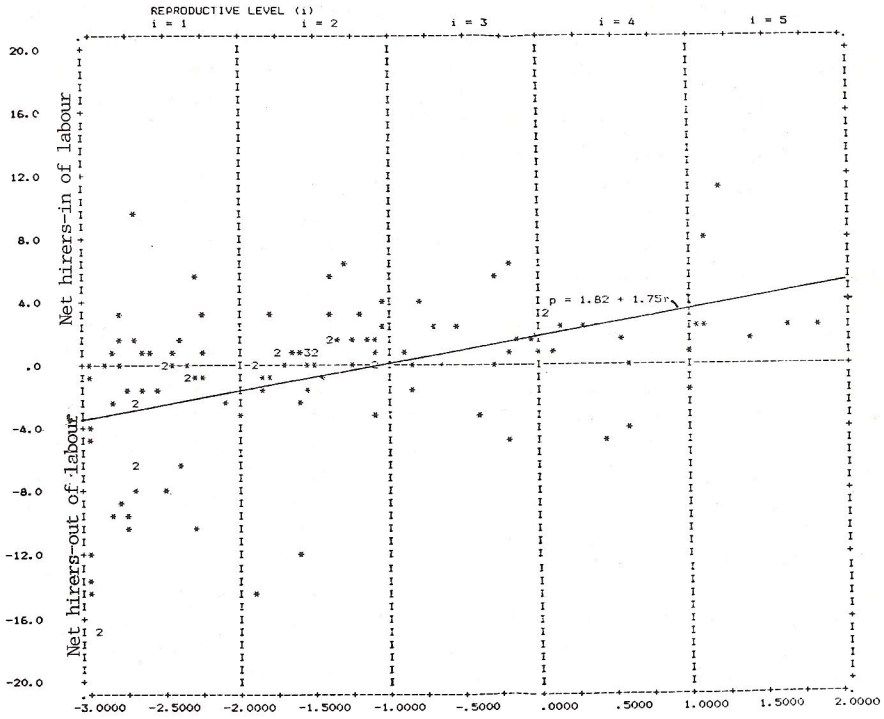
So the statistical basis is not absent for this result, which *theoretically* is very significant: only farmers at the lowest levels of reproduction ($r = 1$ or 2) tend to be net hirers-out of labour. Obviously this is the majority of all farmers, but it is significant that in our sample, important sections of the middle peasantry (those at reproduction levels 3 and 4) tend to be net exploiters of hired labour.

If this finding is not spurious, it throws doubt on the usual presumption which is that the middle peasantry is neither exploited as hired labourers to any large extent, nor is it exploiting hired labourers to any large extent. These results also undermine the presumption that the two criteria of class should ideally give the same result in all cases.

Since the statistical basis is somewhat weak, we should be careful not to draw too rash conclusions from this, but it is tempting to revert to our previous analysis of the criteria of class which brought out the difference between them. One such difference is in focus: the participation criterion focuses on the primary relations of exploitations (wage and family labour), while the surplus criterion incorporates also the results of secondary relations of exploitation such as landlordism, usury, mercantile exploitation, etc. If it is accepted that net labour hired-in ($H_i - H_0$) reflects exploitation in the process of production – that is, if it is accepted that labour hired-in and labour hired-out in the aggregate contain equal proportions of necessary and surplus labour – then the discrepancy between the participation index and the surplus criterion could be due to *the aggregate effect of the secondary relations of exploitation.* In other words, the two criteria would reflect different facets of the class structure.

DIAGRAM 1

SCATTERGRAM AND FITTED LINE SHOWING THE RELATION BETWEEN THE TWO CRITERIA OF CLASS FOR MAIN SAMPLE CASES



If the trends in our data are correct, even the small farms at reproductive level 3, and to a certain extent also those at level 2, tend to be net exploiters of hired labour. But the surplus produced by this labour and by family labour is appropriated from the farmers by landlords, money-lenders, and merchants, and/or is pumped out of agriculture as a result of the terms of trade between agriculture and the non-agrarian sectors of the economy.

IX. FINAL CLASSIFICATION OF INDIVIDUAL HOUSEHOLDS

In the preceding sections we have evaluated a method of classification based on the combination of two criteria, defined independently of each other. Our results lead us to discard this method, since we cannot uphold the postulate on which it builds, namely, that the two criteria are independent measures of the same dimension of the agrarian class structure. The practical consequence of the above is that we are left with only one index of class, namely, the surplus criterion, since in the course of the analysis a number of weaknesses have been discovered in the participation index.

There are some problems, however, in using the surplus criterion as the sole indicator of class. They are mainly two:

(1) The surplus criterion is more sensitive to flaws in data than the participation criterion: like underreporting of yields, exaggeration of costs, etc.
(2) The criterion ideally demands data for a series of years where yearly and seasonal variation can be separated from more permanent features of the farm economy.

On both these accounts our data are far from ideal. Our survey was based on the so-called recall method, rather than the superior diary method. This means that data are subject to memory slips and other types of bias on the part of our repondents. Poor and contradictory data is one source of weakness and imprecision, not in the surplus criterion as such, but in its application to our data. Our data cover only one crop-year for each farm. This year is slightly variable, covering either 1978/79 or 1979/80. Fortunately these years were close to normal in terms of rainfall, but still crop failures is another source of distortion in the surplus criterion.

Imperfection in data, then, is a source of imprecision in the application of the surplus criterion. The level of precision can be improved, by incorporating other information about the households, especially indicators of reliability, of consistency and of non-normal features of the farm economy in the reference year. These can be weighed against the result of the surplus criterion in order to arrive at the likely class status of the individual household. We have done this manually, not on the computer, since very complex considerations have to be made in judging the reliability, consistency and representativeness of an interview.

In the final classification 21 households have incomplete or unreliable data which render them unclassifiable by the surplus criterion (see Table 7). Twelve

of these cases have been manually assigned to a class after inspection of the data. Only nine cases have so fragmentary or contradictory data that they remain unclassifiable. Out of the 147 cases where data permit an application of the surplus criterion, 125 or 81 per cent are 'correctly' classified by the criterion, while 22 cases have been assigned to another class than the one indicated by the surplus criterion.

The largest single group here are those who have been assigned to a higher class than that indicated by the criterion. The most common ground for this upward revision is harvest failure: with a normal harvest the households would belong to a higher class than that indicated by the criterion. A related, but less frequent ground is poor data, namely, understated yields and/or exaggerated expenditures. Only two households have been assigned to a lower class than that indicated by the criterion. Both have had irregular sources of income in the reference year – sale of livestock in both cases.

A final category of households are those which have been assigned to the category 'other', although they have been assigned to a class by the criterion. Besides three borderline cases, this category contains three cases which are difficult to squeeze into a peasant class. All of them show some petty rentier characteristics, although they do cultivate land themselves.

TABLE 7

CLASS AS INDICATED BY THE SURPLUS CRITERION CROSS-TABULATED BY FINAL CLASS ASSIGNED TO HOUSEHOLDS IN THE MAIN SAMPLE

Reproductive level according to surplus criterion	Final Class: Poor peasant	Lower middle peasant	Middle peasant	Upper middle peasant	Surplus appro-priators	Others and unclassi-fiable	Total
1	51	8	0	0	0	3	62
2	0	38	0	0	2	1	41
3	0	1	13	2	1	2	19
4	0	0	1	8	0	0	9
5	0	0	0	0	16	0	16
Unclassifiable by (r)	6	4	0	1	1	9	21
Total	57	51	14	11	20	15	168

The sum total of all revisions yield the distribution shown in the column totals of the table. This is the closest we can come to a determination of the class structure by means of the surplus criterion. Note that the names given to the three divisions of the middle peasantry are arbitrary.

The analysis does not terminate here, however, since one major step remains: in the table all surplus appropriators appear under one heading, although this category is a very heterogeneous one. It contains within itself several classes or sub-classes. A subdivision of this group is our next task.

X. CHARACTER OF THE SURPLUS AND SEGMENTATION OF THE EXPLOITING CLASS

In order to subdivide the surplus appropriators we must specify the forms which the surplus can take. Materially, of course, the surplus first takes the form of a quantity of farm products which, since they are potential commodities, can be converted into money form. This can be used as capital for accumulation, or for investment inside or outside agriculture. It can also be consumed, in which case we regard it as luxury consumption. But the uses to which it is put are at present less important than the sources from which it stems. Distinguished by source,the surplus may be either profit or land rent.

Land Rent

In the wet area about half of all lands are tenant-operated. Rent is paid both in kind and in cash, and at varying rates. Tenants who are protected by tenancy legislation pay fairly low rents, sometimes bordering on the symbolical, as when they pay a fixed money rent which is continuously devalued by inflation. They can also mortgage their land on a usufructuary basis, which essentially is a form of sub-leasing of land. Fixity of tenure here obviously approaches practical ownership of the land.

But these are only about half of all tenants cultivating around 50 per cent of all leased-in land. We also have sharecroppers of the classical variety paying 50 to 75 per cent of the produce (net of harvest wages) as rent in kind. This form leaves little room for surplus appropriation by the tenant. Most of the surplus is appropriated by the landlord. Finally,we have capitalist tenants, who lease in land for a fixed cash rent, and who compete in the lease market with ordinary sharecroppers, outbidding the latter by offering to pay higher rents.

The presence of the last category is significant because it signals the presence of the capitalist entrepreneur; and it indicates under what conditions he has to operate: in competition with small tenants paying their entire surplus product as rent. This implies:

(1) that the production conditions for the crop grown by the tenants (paddy) determines the general level of rent (with the exception of land under registered leaseholds);
(2) the money equivalent of this kind rent is set by the price-level of paddy; and
(3) that the capitalist tenants make profit only after the payment of rent.

Thus, the relation between rent and profit is here the reverse of the English nineteenth century case as portrayed by Marx in volume III of *Capital* where profit is primary and land rent secondary. Marx's case is different, not only geographically, but also structurally: Marx presupposes the universality of the capitalist mode of production; production is carried on only if it yields an average rate of profit; and only if there is some surplus profit over this average can it be converted into land rent. This is what Marx had in mind when he

subtitled Part IV of volume III as 'The transformation of surplus profit into ground rent'.

In our case, the relation of land rent and profit is the reverse (cf. Patnaik [1976]). Land rent is the primary category, profit is secondary. This depends on the presence of a land-hungry peasantry willing to forego profit to attain his subsistence. His capacity to pay rent from his subsistence production of paddy sets the average rate of rent. Only if there is a *surplus* over this average can it be transformed into profit. The possibility of this 'transformation of surplus into profit' hinges on the superior productivity of the capitalist entrepreneurs, as correctly pointed out by Patnaik [1976]. This possibility can be realised in banana cultivation.

With a total investment of Rs.500 to 700 per acre, capitalist farmers reap 1,200 to 1,500 kg. of paddy, giving them a net profit of Rs.700–800. Two such crops can be taken in a year, so a net profit of Rs.1,400 to 1,600 per acre in a year should be compared with that for one banana crop (since banana is a one-year crop). To grow an acre of banana requires an expense of Rs.2,700 to 3,500, and it fetches some Rs.6,000 to 9,000 in the market. The rate of profit is roughly the same for both crops, but what is important in this connection is not the rate but the volume of profit. Here banana is clearly superior giving a net profit per acre and year which is more than double that for paddy.

Paraphrasing Marx's differential rent I and II, we might define surplus of type I and II and say that the capitalist entrepreneurs in banana cultivation realise a superior level of productivity which allows them to produce *surplus of type II* and transform it into *profit*, after having paid the counterpart of the *surplus of type I* (and maybe somewhat more) as cash rent to the landlord.Surplus of type II is not universal. It can be realised only through higher productivity. But surplus of type I is more or less universal in the wet area: its good soils and, most important, its excellent irrigation, assure a level of productivity that is higher than that which determines the production price of paddy prevailing in the market. This is the source of its 'universal' surplus of type I which is the economic precondition for the prevalence of tenant cultivation in the wet area.

A Model for Class Segmentation

This lengthy argument leads to a definite characterisation of the surplus in the wet area. If a landowner cultivates his own land, it means that the potential rent from the land takes the form of income from own cultivation. This income, then, is *implicit land rent*, and only if the surplus appropriated from own cultivation exceeds the average rate of rent can it be regarded as profit (surplus of type II).

If we denote implicit land rent as S_{r_i} as opposed to rent received from land leased out ($^{s}r_{o}$), and as opposed to profit (^{s}p), we can decompose the surplus appropriated by a household (S) according to the following:

$$S = s_{r_i} + s_{r_o} + s_p \qquad (10.1)$$

But it is the relation between s_{r_i} and s_p which is interesting, so if we abstract for a moment from rent receipts we get:

$$s_{r_o} = 0 \longrightarrow S = s_{r_i} + s_p \tag{10.2}$$

then we get the conditions for profit as:

$$s_p > 0 \longrightarrow S > s_{r_i} \tag{10.3}$$

The corollary is:

$$S < s_{r_i} \longrightarrow s_p \leq 0 \tag{10.4}$$

In the latter case, income from own cultivation would contain only implicit land rent; and the cultivator must be regarded as a rent-receiver whose surplus stems, not from his entrepreneurial activity, but from his ownership of land.

If $s_p > 0$ on the other hand, the cultivator would have some capitialist entrepreneurial characteristics. These capitalist farmers could be sub-divided by bringing in implicit rent. Take first the case which follows from (10.2):

$$s_{r_i} = 0 \longrightarrow S = s_p \tag{10.5}$$

Here we can think of a holding which, if cultivated with the rent-setting crop (paddy) and with average productivity, would yield no surplus for the cultivator (only rent for the landowner if the holding is a leased one). In other words, we have to think of a poor or middle peasant holding. Cultivated with superior productivity, either of paddy, or more likely with some capital-intensive crop like banana, the holding could yield a profit (surplus of type II). If this possibility is realised by a landowner or a tenant, it would be correct to call him a rich peasant who, by virtue of capital investment in production and entrepreneurship, is able to move upwards from the poor or middle peasantry into the ranks of the suplus appropriators.

Another case fulfilling the conditions specified in (10.5) would be the capitalist tenant already referred to.

A third possibility is that we have:

$$s_p > 0 < S - s_p \longrightarrow s_{r_i} > 0 \tag{10.6}$$

Here we have a landowner who is not content with the implicit rent yielded by his holding, but who invests capital in intensive cultivation and produces a profit exceding the level of implicit rent. We can call this type a capitalist landlord since he combines rent and profit appropriation.

A final possibility is:

$$s_{r_i} + s_p = 0 \longrightarrow s_{r_o} > 0 \tag{10.7}$$

This would of course be the pure landlord whose surplus exclusively consists of rent from leased-out land.

This way of treating land rent proper implies that when a landowner is cultivating at least parts of his land himself, the mode of cultivation on that land becomes decisive for our way of classification. In other words, to all the preceding formulas except the last one we may add a condition:

$$s_{r_o} \geq 0$$

This argument can be summarised in a table:

TABLE 8

KEY FOR SUB-DIVISION OF SURPLUS APPROPRIATORS

Level of implicit rent (s_{r_i}):	Level of profit: (s_p) $s_p = 0$	$s_p > 0$
$s_{r_i} = 0$	pure landlord (cf. 10.7)	rich peasant *or* capitalist tenant (cf. 10.5)
$s_{r_i} > 0$	cultivating landlord (cf. 10.4)	capitalist landlord (cf. 10.6)

In the dry area, characterisation of the surplus is much simpler. Since tenancy is so infrequent, land in the dry area generally carries no implicit rent, that is, in general $s_{r_i} + s_{r_o} = 0$ and thus $s_p > 0$. Surplus appropriating farmers in the dry area must thus be regarded as capitalist entrepreneurs. This goes well with the fact that they derive their surplus mainly from *thottam* lands, and from the investment of capital in wells and pumpsets. Only tank-fed lands could perhaps yield some surplus of type I, but since they are so marginal (two per cent of all land operated, five per cent of all irrigated land in the dry area),[11] it seems fair to characterise surplus appropriators in the dry area as rich peasants in the original sense of the word, that is, as deriving their surplus from entrepreneurial activities and from capital investments in the land.

This is not to deny the importance of landed property in the dry area. It is a precondition for appropriation, but it is not in general an independent source of surplus in the form of land rent, as it evidently is in the wet area. In the dry area, the monopolisation of the means of production (wells and pumpsets) through the investment of capital is the basis of the class structure. Paradoxically, we thus have a purer form of capitalist farming in the dry area then in the wet one, where capitalist development has to overcome the barrier created by landed property and land rent.

On the other hand, this 'purer form' of capitalism goes together with very backward relations, such as bonded labour and usury, both of which, as we will show elsewhere, are more common in the dry area than in the wet one.

APPLICATION OF THE MODEL

In formula 10.1 only s_{r_i} and s_p are unknowns, that is, in order to apply this model we need an estimate of the implicit rent carried by an acre of owner-cultivated land in the wet area. Then we would get:

$$s_p = S - (s_{r_i} + s_{r_o}) \qquad (10.8)$$

Open market rentals for wet land vary a great deal, but we found that a rough estimate of Rs.1,000 per acre was all we needed in order to be able to assign the surplus appropriators to their respective classes.

In Table 9 we give the results both for the main sample which we have so far discussed, and for the separate material collected from the wealthiest one per cent of the households, the census of the upper percentil (UPC). Again note that the material is unweighted so it does not give any population estimates, but merely describes the structure in our material.

TABLE 9

SEGMENTATION OF SURPLUS APPROPRIATORS IN THE WET AREA (FOR THE MAIN SAMPLE AND FOR THE CENSUS OF THE UPPER PERCENTILE (UPC))

Class	Main sample	UPC
Rich peasant	9	0
Capitalist farmers	5	25
Cultivating landlords	2	5
Pure landlords	3	1
Total	19	31

It strikes the eye that the parasitic rent-receivers, the landlords, are numerically in a minority (about 25 per cent of the surplus appropriators in the main sample), and that the capitalist entrepreneurs is such a large group. This is a very significant finding which implies that the high level of land rent has not acted as an absolute barrier to the development of capitalist farming. We will return to the reasons for and the implications of this remarkable result.

The capitalist tenantry, which is such a strategic group for the development of this analysis, is not numerically strong. They have been merged with the capitalist farmers in the description of the population.

XI. THE EMERGING PICTURE OF THE CLASS STRUCTURE

To arrive at the population estimate, main sample cases have to be weighted village-wise. UPC's are weighted = 1. Weighting gives the following result,

The precision of the estimate is decreased somewhat by the category 'others and unclassifiable' which contains cases with contradictory, incomplete, or unreliable data. The higher proportion of such cases in the wet area is mainly due to a number of petty landlord or rentier cases placed in this category. Although their rental income is not high enough to provide them with full subsistence, and thus to make them into landlords, it is so significant that it

TABLE 10

ESTIMATED CLASS STRUCTURE OF WET AND DRY AREA (PERCENTAGES OF AGRARIAN POPULATION)

Class	Wet area		Dry area	
Rural proletariat				
Agricultural labourers	30	49	16	44
Poor peasants	19		28	
Middle peasants				
Lower middle	13		33	
Middle	3	21	9	46
Upper middle	5		4	
Surplus appropriators				
Rich peasants	6		4	
Capitalist farmers	5	14	0	4
Cultivating landlords	2		0	
Pure landlords	1		0	
Others and unclassifiable	16		6	
Total	100		100	

would be wrong to treat them either as peasants or as agricultural labourers. Some of them are what could be called 'social security cases': that is, they are unable to cultivate their land due to old age or physical or social handicaps, and are forced to rent it out.

Looking at Table 10, it emerges that the size of the rural proletariat is not very different between the two areas. The higher polarisation in the wet area is reflected, not so much in the size of the rural proletariat, as in its composition. More than 60 per cent of rural proletariat in the wet area are not cultivating any land. Here the poor peasantry has been reduced to a minority, while the situation is the reverse in the dry area. There only 36 per cent of the rural proletariat do not operate any land. This difference in proportions is further reinforced by qualitative differences: the wet rural proletariat is a specialised workforce, with less land, less non-agricultural income (see Table 10), and with higher forms of organisations (the gang system, see above section IV). The dry rural proletariat is at most a class in formation. As we have seen, they are less alienated from the land; many of those who do not cultivate any land still own some land which is kept fallow. They are less specialised in agriculture, and earn a significant share of income from non-agricultural sources.

The most dramatic difference between the two areas is in the size of the middle peasantry. The polarised nature of the class structure in the wet area is directly reflected in the size of the middle peasantry, a mere 21 per cent. By

contrast, nearly half the agrarian population in the dry area (46 per cent) belong to the middle peasantry.

The favourable conditions for agricultural production in the wet area, and the surpluses which they make possible, are directly reflected in the size of the category of surplus appropriators, which reaches an impressive 14 per cent of the population in the wet area, a proportion which is three or four times higher than that in the dry area. The 14 per cent of surplus appropriators in the wet area is internally segmented in a most significant way. The high level of surplus has formerly been associated with an elaborate system of landlordism of the classical South Indian type. It is a measure of the profound transformation that has occurred since Independence that only about 20 per cent of the surplus appropriators can now be classified as landlords. This transformation has made it possible for a stratum of rich peasants, constituting about 40 per cent of the surplus appropriators, to assert themselves. Out of the big landowners (that is, rich peasants uncounted), a majority of nearly two-thirds have been classified as capitalist farmers.

The dry area has never had such an elaborate system of landlordism. Its system of tank irrigation may once have supported a small landlord class, but nothing like as wealthy as its counterpart in the wet area. This structure seems to have disintegrated concurrently with the tank system. We find no representatives of this old landlord class in our material. Without exception, our dry rich peasants have invested in wells. These wells often have a superior location on tank-fed lands. Thus the owners of such good lands – the landlords of the old system – are better equipped to take advantage of the advent of pump irrigation. But it would be wrong to label these cultivators landlords: since their income has no rental elements, but is surplus of type II, stemming from investment of capital in the land, and bearing the form of profit.

A precise designation would be the combined category rich peasants/ capitalist farmers, because it is difficult to find any exact economic ground for drawing the boundary between the two categories. At the lower end of the interval we would have the rich peasant for whom participation with own labour in production, although not necessary for the appropriation of surplus, is still important to the size of the surplus. At the upper end we would have the capitalist farmers for whom participation with own labour is truly marginal in its effect on the size of the surplus.

The most striking feature of the middle peasantry in both areas is that the *middle peasantry proper*, that is,those that reproduce themselves fully and autonomously thanks to their own labour, is a small group in both areas (24 per cent of all middle peasants in the wet area, and nine per cent in the dry area). The majority of the middle peasantry is pushed below the level of autonomous reproduction, and depend on non-farm sources of income for their reproduction. One way to interpret this finding is to say that there is no middle peasantry to speak of in any of the areas, except those that we have labelled upper middle peasants. We prefer another interpretation: there is a sizeable middle peasantry, especialy in the dry area, but it is squeezed so hard

that few of them can subsist only on their farming.

The squeeze is exerted by market forces, and it is made effective by the significant inroads of commoditisation both into consumption and into farm reproduction. In the process,the middle peasantry has become more vulnerable to unfavourable fluctuations in the prices paid for consumer goods and farm inputs, and prices received for labour hired-out.

In this interpretation, price and market conditions exert a profound influence on the agrarian class structure. But the poor peasants are relatively less influenced by movements in the price of farm produce, since they are not commodity producers to any significant degree. They are, however, affected by market forces to the extent that they use purchased inputs, and to the extent that prices of industrial consumer goods affect the real value of the wages they earn from hiring-out. There is, however, a certain fluidity in the class structure, between the different types of middle peasants, and even between the middle and the rich peasantry which is due to the movement of the prices. A more favourable relation between prices received and prices paid might have resulted in more rich and upper middle peasant households. Seasonal and yearly variations in yield induce a similar fluidity.

This fluidity might seem alien to the concept of class, since class has some robust and viscous connotations. A critical reader may conclude from this lack of viscosity that we have not managed to capture the agrarian class structure in our area. We prefer another interpretation, namely, that the agrarian class structure is quite fluid, except at the extreme poles. The nature of our data, that is, their covering of only one crop year, makes it impossible to measure this fluidity. But in a forthcoming publication we hope to be able to specify its possible size and its effects on the class structure. As it now is, Table 10 is like a snapshot of a process in movement which hides the fact that the size of the classes is variable.

The price-induced fluidity in the class structure brings to focus the role of the state in the formation of the agrarian class structure. Agricultural prices, both on the output and the input side are to a significant extent administered prices, and thus there is a political element hidden behind the 'invisible hand' of the market.

IN LIEU OF A CONCLUSION

One conclusion of this methodological exercise is that Patnaik's index of exploitation seems less useful as a tool of research than we ourselves had expected. A surplus criterion of class like the one formulated above, while being very demanding in terms of data, seems more promising, both in allowing the identification of the class status of individual households, and in giving clues to significant aspects of the class structure of which they are parts. It should be stressed, however, that the surplus criterion cannot be more than one in a set of tools used for class analysis. It does not tap all the complexities of class, even if the class analysis is provisionally restricted to the economic level, as has been done in this article. We will return to the further analysis of the class structure in our area in forthcoming publications.

NOTES

1. It should be clear from the context that in this article the term 'self-exploitation' is not used in the Chayanovian sense in which it is presumed that the peasants work at an implicit wage rate which is lower than the opportunity cost of wage labour.
2. Consumption units are calculated as follows:
   children aged 0–3 are counted as .25 c.u.s.,
   children aged 4–7 as .50 c.u.s.,
   children aged 8–15 as .75 c.u.s.,
   adults aged 15–59 as 1 c.u.,
   adults above 60 as .75 c.u.
3. An exception would be the man in one of our wet villages who grows bananas on his six cents of land. He is a *petty* commodity producer (with the stress on 'petty'). If the majority of the smallest farmers had been like him (that is, $L = 0$, $K = A$ and $Y < K$), there would have been less of a rationale for letting grain requirement serve as cut-off point between categories.
4. That is, the equivalent of Rs.15 per capita and month in 1960/61 prices.
5. Here we have used the farm price as shadow price, that is, 1.15 for paddy and 1.00 for coarse grain. For the *panneial* the implicit cash value of the wage is higher.
6. In a recent article Barbara Harriss [1983] uses $p = H_1/H_0$ as an index of class (since she has no access to data on family labour (F)). She estimates the size of the middle peasantry by arbitrarily assigning them to the interval $0{,}7 < p. < 1.43$. On this basis she claims that the middle peasantry is a very insignificant category in her areas (drought-prone areas in South India). Our own hypothesis would be the contrary: in these very dry areas the middle peasantry is likely to be numerically dominant. To establish or refute it would require other methods and data than those used by Harriss, however.
7. Seventeen cases with the absolute value of $p > 20$ or $r > 2$ have been excluded from the scattergram.
8. The correlation would be even lower with the above-mentioned extreme cases included.
9. Note that here r^2 denotes Pearson's r, not our reproductive level (which in this text is also symbolised by (r)).
10. Other studies point in the same direction. When the p- index is applied to data from Thaiyur *panchayat* in Chingleput District, we get a bigger rich peasantry than we get with a criterion based on surplus appropriation. [*Djurfeldt and Lindberg,* 1978:64]. We suspect that a similar relation would be found in Haryana, since Patnaik's own application of her index to data from that state shows that the middle peasantry (according to the p-index) do not reach the povery line [*Patnaik,* 1983]. The tendency is the same in Barbara Harriss's study [1983] where it seems even a section of the rich peasantry lives below the poverty line!
11. This is *nanjei* without wells. Eighty-six per cent of all nanjei in the dry area have supplementary irrigation from wells.

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