The commoditization debate: labour process, strategy and social network

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Agricultural University Wageningen 1986

CIP

ISBN 90-6754-087-0

Printed in the Netherlands

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SERIE

Mededelingen van de vakgroepen sociologie/
Papers of the departments of sociology
17

The purpose of this series is to report on ongoing research at the Agricultural University Wageningen, primarily by staff and students of the Department of sociology and the Department of rural sociology of the tropics and subtropics.

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ACKNOWLEDGEMENTS

This volume was written at considerable speed at a time when the authors were busy with numerous other commitments. It was also a hectic period for the secretarial staff. We would like to express our thanks to those who gave generously of their time to get the volume out quickly. We thank Nannie Brink and Jos Michel for their assistance in typing earlier drafts, Piet Holleman for drawing the diagrams, and Ann Long for her editorial work. We owe special gratitude to Ans van der Lande without whom the volume would not have seen the light of the day. Ans prepared the camera-ready text, suffered the trials and tribulations of operating a new computer system, and worked late into the night to reach deadlines.

The chapters do not single out individuals for acknowledgement since each one of us has benefitted from the extensive comments of the others. However, we would like to mention collectively the particular contributions made by Henry Bernstein who started off this paper chase, and our friend and colleague Bruno Benvenuti for his ever-innovative interventions. Finally, we would like to acknowledge the fruitful inputs of our students at Wageningen who have taken up the challenge of the commoditization approach with enthusiasm and have pressed us hard to clarify our own views and criticisms.

I. INTRODUCTION

This volume gives vent to certain theoretical and empirical misgivings which researchers at the Department of Rural Sociology in Wageningen have increasingly felt this last year as they have attempted to come to grips with the interesting, but at times analytically frustrating, work on commoditization and how it affects peasant and farmer livelihood and strategy. We were stimulated to devote time to appraising and debating commoditization models by the visit to Wageningen of Henry Bernstein of Wye College, London University, who provoked us into weighing up the various advantages as well as the shortcomings of commoditization approaches. We were lucky, too, to have the opportunity to continue these discussions in a Workshop on 'Theoretical Advances in Rural Sociology' organized by David Seddon of the University of East Anglia at the Braga Conference of the European Society for Rural Sociology (April 1986), at which Bernstein and other researchers interested in commoditization issues were also present. We would like to thank members of this workshop, and especially Henry Bernstein, for their contributions to this confrontation of views on the role of commoditization in agrarian change and to the discussion of the part played by peasant and farmer strategies in this process.

The debate

The central issue in the analysis of commoditization concerns the impact of increasing commercialization and integration of farming enterprises and households into the wider capitalist economy. The commoditization approach represents a reaction to two earlier contrasting interpretations: the Leninist 'differentiation' model, which emphasizes the inevitable destruction of peasant forms of production leading to the emergence of a polarized class structure made up of an

agrarian bourgeoisie and a rural proletariat; and the Chayanovian position which stresses the viability, internal logic and dynamic persistence of peasant forms of organization despite capitalist encroachment. Commoditization theory attempts to find a way out of this apparent dilemma by arguing that the debate is essentially false, since simple or petty commodity production is an integral part of any capitalist social formation. Thus labour processes or units of production that exhibit 'peasant' or 'pre-capitalist' features are not to be seen either as intrinsically 'transitional' and doomed to eventual extinction, or as self-perpetuating and sealed off from the influence of the capitalist economy. Instead they must be examined closely to establish the precise ways in which commodity exchange and market mechanisms shape and reproduce these specific forms of production.

In the same way commoditization theory claims to go beyond dualistic formulations such as that of the articulation of the capitalist mode of production with other modes that are assumed to have their own internal logic of production and reproduction. It also aims to resolve the theoretical inadequacies of dependency models that reduce the workings of the capitalist economy to principles of circulation and exchange rather than relations of production. Furthermore, it may be viewed as replacing earlier broad and largely descriptive accounts of change based upon the concept of 'incorporation', with a more theoretical treatment that is fed by ideas from political economy.

In so far as commoditization theory corrects the deficiencies of these various formulations, it promises to provide a more solid analysis of agrarian transitions and of social and economic change in general. However, a closer examination of the tenets of commoditization theory as currently available reveals a number of fundamental shortcomings. These revolve essentially around the lack of attention given to the active role played by peasants, farmers and small-scale entrepreneurs in the process of commoditization itself. Indeed, one might even say that commoditization theory avoids the central issue of why precisely do farmers and others submit themselves to the fate that this theory assigns them to, namely to the condition of being totally controlled "by definite and precise forms of capitalist regulation which act as the absolute limits of their activity" (Gibbon and Neocosmos, 1985:165).

Following this line of reasoning one can make a number of specific

criticisms of commoditization theory. First, there is the tendency to stress external determination, which, despite attempts to stand apart from Leninist notions, tends towards a linear view of agrarian development. Second, as indicated above, it is necessary to bring farmers and simple commodity producers back into the picture in order to explore what commoditization means in the everyday life of those it affects. Adopting such an actor-oriented perspective directs one towards the study of diversity and variation in social process, which, in this case, highlights such critical aspects as farmer and/or household strategy, and the management of labour processes. It also has the additional advantage that one is forced to take note of the basic 'operational' units (e.g. households, cooperatives, and water-user associations) that in part shape the responses of individual peasants, farmers or entrepreneurs to outside market or state intervention. Commoditization theory remains at the level of a generic model of capitalist expansion and simply fails to deal satisfactorily with variations in the responses of different farmers or groups to these processes of incorporation. Third, it also fails to investigate the nature of the various intermediate structures that mediate between the farmer or the entrepreneur and the wider economic and institutional environment in which he is embedded. The nearest the commoditization literature gets to this problem is the discussion of the family-household as a basic unit of socio-economic organization, and an occasional nod in the direction of patterns of reciprocal exchange among neighbours or kinsmen. Clearly, then, it is crucially important to examine more systematically the types of relationships that exist between the farm, household or enterprise and various external structures. Although, as some writers put it, externalization (i.e. the delegation of production and reproduction functions to external bodies) may undermine independent farmer decision-making and the autonomy of the farm, these outcomes are by no means automatic or uniform. Furthermore differences in the degree of externalization within a given farming population are likely to be reflected in differences in the scales of production, levels of capitalization and styles of farm management. Such differences, however, should not, as Bernstein (1986: 19) suggests, simply be regarded as a matter of empirical diversity requiring 'concrete investigation'. Their explanation should be part and parcel of a theory of commoditization and the

differential patterns and forms it takes.

A further issue is the extent to which farmers or other groups resist the inroads of commoditization. This again involves the question of people organizing themselves rather than being organized! It is our view that whatever the degree of commoditization and state control over production or over the functioning of the enterprise, there remains some space for manoeuvre for organizing 'counterdevelopment'. Commoditization theory largely ignores these processes and simply assumes that the agencies of commoditization (private and public) are far too powerful to be affected much by struggles from below.

Each chapter that follows takes up these issues in different ways. Our common thread is that, while criticizing and pinpointing the weaknesses of commoditization approaches, we seek to develop forms of analysis that combine the best of commoditization ideas with those that focus upon actor strategies and interactions. As Long (1984: 10) has previously emphasized, "a sociological analysis of structural change requires 1) a concern for the ways in which different social actors interpret and manage new elements in their life-worlds; 2) an analysis of how particular groups create space for themselves in order to carry out their own 'projects' ... and 3) an attempt to show how these interactional and interpretive processes can influence (and are themselves influenced by) the broader structural context". This, then, provides the broad theoretical sweep of the individual contributions of this volume.

Overview of the volume

The collection opens with a 'state of the art' paper (Chapter 2) which offers a general critical assessment of commoditization theory. A central part of the chapter is devoted to a working out of some key issues summarized by Bernstein during his recent visit to Wageningen. This provides the basis for identifying the strengths, lacunae and theoretical inadequacies of commoditization theory. The discussion also briefly indicates how one might begin to rectify some of its shortcomings through the use of a more explicitly actor-oriented approach that gives greater emphasis to the ways in which farmer and

householder strategies shape the outcomes of commoditization.

This is followed by Chapter 3 which explores the usefulness of the commoditization approach for analysing changing patterns of farm labour and management. In doing so it highlights a major weakness in this approach, namely its failure to give sufficient attention to the agricultural labour process per se. More systematic analysis of labour processes and of the active role played by farmers in farm development reveal two further important but largely neglected aspects: the influence of non-commoditized elements and social relations on commodity production and the growing significance of 'scientification' for farm organization and management.

Chapter 4 tests the applicability of Chayanov's ideas on peasant economy for understanding the structure and transformation of family farms in the West of Ireland. The argument is developed through a careful consideration of the early work of Arensberg and Kimball, whose classic monograph 'Family and Community in Ireland' (based upon fieldwork carried out in the 1930's) continues to provoke heated discussion; and through an assessment of recent 'peasantization' versus 'commoditization' interpretations of the Irish case. The chapter concludes by stressing the need to break the deadlock through integrating Chayanov's concern for non-commoditized relations and peasant family strategies into an analysis of the broader processes of commoditization and differentiation.

At this point the discussion extends beyond that of small-scale commodity production in agriculture to include non-agricultural economic activities. Thus, Chapter 5 analyses contrasting patterns of social organization among petty commodity producers and traders in the central highlands of Peru. The analysis shows how differential use of social networks and cultural repertoires for structuring labour processes produces different types of enterprise organization. The variations that emerge are also associated with different occupational niches within the field of petty commodity activity. These findings highlight the need to consider the role of interactional and cultural resources in the social reproduction of petty commodity enterprise.

The final paper (Chapter 6) explores a theme common to several of the previous chapters, namely the degree to which the social reproduction of farms or economic units depends on mechanisms other than the market or commodity exchange. This issue is elaborated through

focussing upon one crucial, though often overlooked, element of agricultural production - the acquisition and use of genetic materials necessary for crop reproduction. The discussion emphasizes the importance of informal cultivator networks for the dissemination of materials and farming knowledge rather than state- or privately-organized formal agricultural institutions. In addition, it is argued that there appears to be no direct correlation between the level of crop commoditization and the extent to which external institutions are responsible for crop reproduction.

These various contributions, then, constitute the substantive materials upon which the general argument of this volume is built. Its main purpose, as we suggested at the outset, is to initiate a discussion of the merits and weaknesses of commoditization approaches. Whilst we welcome enthusiastically the burgeoning of literature on commoditization that has taken place in recent years, we wish to sound a warning on two fronts.

The first concerns the tendency towards a hardening of theoretical dogma in order to keep intact certain cherished views on the nature and potency of capitalist development. How else can one explain the search for "a concept of small-scale commodity production constituted exclusively through the categories of the capitalist mode of production" (Bernstein, 1986:1)? This, we believe, has had the unfortunate consequence of narrowing the theoretical debate to the exclusion of possibly useful alternative perspectives.

The second warning relates to the problem of the gap that often exists between theoretical statement and empirical understanding. One explanation for this tendency is that theoretical discussion usually takes off from theoretical discussion, rather than from the attempt to grapple with, and come to a better understanding of, concrete problems and realities. It is for this reason that in this collection we have chosen to confront theory with empirical findings and to open up new avenues of analysis through discussion of particular concrete situations.

Although the reader will no doubt identify differences of opinion or theoretical inconsistencies among the individual contributors, our general research focus should be clear: we aim to develop types of analysis which give more serious weight to the ways in which the actions and strategies of farmers, petty commodity producers, and

small-scale entrepreneurs shape the impact and outcomes of capitalist intervention. Viewed from this angle, commoditization becomes an active element within the livelihood strategies of individuals, enterprises and households rather than simply a force impinging upon them from without.

II. COMMODITIZATION: THESIS AND ANTITHESIS

Norman Long

One theoretical approach occupies a central place in recent discussions of agrarian social change. In its most general form it is usually referred to as the political economy or historical-structural approach (see Harris, 1982). This broad perspective has many variants which differ in their particular interpretations of the causes and consequences of agrarian change. Nevertheless they have in common an interest in examining the processes by which capitalism penetrates rural economies and restructures socio-economic life.

Integral to such a political economy approach is the analysis of various commoditization processes and their impact on the household and agricultural economy of rural inhabitants. A number of important recent contributions have underlined the theoretical merits of this approach for analysing peasant and simple commodity production within capitalism (see, Bernstein, 1979, 1981, 1986; Friedmann, 1980, 1981; Chevalier, 1982: Chapter 4); and others have shown its empirical usefulness (Assadourian, 1980; Meier, 1982; Figueroa, 1982; Glavanis, 1983; Cook, 1984; Sage, 1984).

The present chapter outlines the main characteristics of the commoditization model, identifies certain of its analytical shortcomings, and suggests ways in which we might rectify these. The discussion concentrates on the household/farm economy and on the problem of analysing the coexistence of commoditized and non-commoditized relationships.

The concepts of 'commodity' and 'commoditization'

The commoditization model originates from Marx's discussion of the notion of 'commodities' and of how they come into existence. As Marx (1979:138) explains:

> "Commodities come into the world in the form of use-values or material goods, such as iron, linen, corn, etc. This is their plain homely, natural form. However, they are only commodities because they have a dual nature, because they are at the same time objects of utility and bearers of value".

Commodities therefore reveal their amount of value when they are exchanged with each other, whether in their "simple form" or in terms of a "universal form" of value. Although in principle any commodity can serve as a general equivalent for measuring exchange value, money normally emerges as the socially accepted form.

Commoditization is the historical process by which exchange-value comes to assume an increasingly important role in economies. This normally implies monetization since the development of commodity exchange leads to the necessity to fix a universal form of value representing the general social estimation of particular commodities. The measurement of value is achieved through the market, where commodities exchange with each other in definite quantitative proportions, such that each commodity can be considered as containing a certain amount of 'exchange value'. The expansion of commodity exchange leads eventually to what Marx calls 'generalized commodity production'.

Marx opens his analysis of capitalism by examining the nature of commodities and commodity exchange precisely because, in his view, the wealth of capitalist societies rests upon the "immense accumulation of commodities". He argues, however, that one should not make the mistake of assuming that, because commodities are exchanged, their relationship rests simply on that between things. Commodity exchange in fact conceals the more fundamental social relationships essential to their production, which in a capitalist economy are 'typically' based on the appropriation of the 'surplus-value' of workers by a capitalist-owner class. Thus the relationships between various goods circulating in a market must be analysed not simply in terms of the ratios at which they exchange with each other, but in terms of the amount of labour embodied in their production and the social relationships entailed.

This tendency to see the products of human labour as 'things', "as an independent and uncontrolled reality apart from the people who have created them", Marx calls "the fetishism of commodities". This notion constitutes the bedrock of Marx's analytical critique of capitalism. The reason for this, as Rubin (1973:6) so clearly indicates, is that "Marx did not only show that human relations were veiled by relations between things, but rather that, in the commodity economy, social production relations inevitably took the form of things and could not be expressed except through things". This latter remark underlines the importance of elucidating the forms of social consciousness that arise within commodity economies that serve to mask the exploitative nature of the relations of capital to labour. Burawoy (1985:32-35) has recently readdressed this issue through a comparative analysis of different 'production regimes' and forms of consciousness or ideology whose effect is, at one and the same time, to "obscure" and yet "secure" surplus value.

Marx's study of commodity relations, then, ties together an analysis of macro-economic phenomena, labour process and exploitation, and forms of social consciousness or ideology. In the discussion that follows I will limit myself mainly to examining the significance of commoditization processes for the agrarian population and peasant enterprise, and only marginally look at other dimensions.

The impact of commoditization

The development of commodity relations within agrarian settings is said to be significant for the following reasons:

The reproductive cycle of the peasant household becomes tied intimately to the market, transforming (but perhaps not totally destroying) the nature of peasant enterprise. Bernstein (1979) talks about the 'reproduction squeeze' in Africa to characterize this process, and research in highland Peru shows the heavy dependence on cash income for the functioning of even the poorest of peasant households (Figueroa, 1982,1984). An increasing percentage of households are unable to meet their basic consumption requirements without recourse to commodity exchange (i.e. without marketing agricultural or other commodities, or without selling their own labour either within or

outside agriculture). This increasing 'hunger for cash' can be measured by calculating the minimal cash element necessary for the consumption basket of household budgets. Commoditization, therefore, tells us something about the relative balance between subsistence as against market-embedded activities; and from this we can make some estimation of the level of commoditization of the household economy. Such data have been used as a proxy for establishing how far the household economy is based on a peasant 'subsistence' as against a 'simple commodity' or 'semi-proletarian' economic strategy.

A related issue concerns the extent to which, in areas of growing commercialization of agriculture, production inputs come to depend upon the availability of capital or credit (e.g. for the purchase of fertilizers, insecticides, hybrid seeds, or for the hiring of machinery and labour) and how far farming strategies (e.g. in relation to cropping and labour patterns) are crucially determined by market factors and external stimuli. The commoditization model normally assumes that increased commercial production binds the farmer more and more to external economic forces and institutional structures, leading to less and less independent farm decision-making. Thus, although farmers may nominally be independent in terms of their control over land and labour, capital (backed by the state and international interests) exercises a substantial influence over the internal operations of the farm and household. The extreme is reached, as Sanderson (1986:25) shows, when agricultural production has become thoroughly 'internationalized' through "a whole new mode of industrial integration", frequently introduced by transnational companies, covering "production contracting, technological 'packaging' for whole industries, and nonequity forms of international control".

The commoditization model also predicts that capital penetration will lead to increased socio-economic differentiation among agrarian populations with the likelihood that over time this will crystallize into new class structures based on differential access to the means of production (e.g. land, water and technology) and influenced by the diversification of sources of income or wealth consequent upon integration into the wider economic arena. According to Leninist interpretations (see, Lenin, 1899; Patnaik, 1979; Njonjo, 1981), economic differentiation eventually generates a tendency towards polarization of classes: between, on the one hand, a relatively small capitalist

landowning class and, on the other, an increasingly numerous mass of agricultural proletarians and marginalized peasants. Other views, while rejecting Chayanov's notion of a partially commoditized but self-contained peasant economy (Chayanov, 1925), suggest that small-scale peasant and simple commodity forms of production often survive in the face of economic differentiation and come to play a central role in capital accumulation in agriculture (see Friedmann, 1980; Long and Roberts, 1984; Gibbon and Neocosmos, 1985; Kitching, 1985).

In a recent lecture at the Agricultural University in Wageningen, Bernstein (1985) stressed the importance of considering a number of other issues relating to commoditization, which we can enlarge upon in the following manner.

In the first place he mentioned the need to take full account of differences in the history of capitalist expansion. The analysis of commoditization should therefore be premised upon the existence of differences in historical context and timing. Commoditization does not occur at the same time or in the same way everywhere. For example, compared with the other continents, colonialism came late to Africa. Africa experienced a long history of indirect involvement in the world economy (note the centuries-old network of trading contacts and the effects of the Caribbean and American slave trade), but systematic incorporation leading to generalized commoditization only began in the last quarter of the 19th Century. On the other hand, Latin America became integrated much earlier into commodity markets through Spanish and Portuguese colonial rule, dating from the mid-16th century onwards. Indeed, during the very early days of the colonial period, there was a rapid expansion of commodity relations, including the recruitment of peasants for wage labour in the mine-based regional economies of the Andes and Mexico (see, for the Andes, Assadourian, 1980, and Larson, 1981; and for Mexico, Chapa, 1978-79).

His second point was that so-called peripheral economies should be considered as generalized commodity economies, not 'pre-capitalist' or 'peasant' societies located on the margins of capitalist markets and economic forces. However the notion of a 'generalized commodity economy' can be interpreted in two ways (for a fuller discussion of these theoretical alternatives, see Bernstein, 1986):

Firstly, it can be used in the classic sense in which all the conditions of production, exchange and distribution are commoditized

(Friedmann's 1981 ideal-typical model of simple commodity production under capitalism makes this assumption). This view, according to Bernstein, is difficult to sustain (even for so-called advanced economies), since we need to take account of forms of non-wage work, such as domestic labour, unpaid inter-household exchange and various types of informal work that are evidently an integral and persisting element of capitalist economies (see Long, 1984; and Pahl, 1984: 339, for an interesting case study of a contemporary household 'getting by' through combining various forms of non-wage and causal work). The 'domestic labour debate' (Fox, 1980; and Redclift, 1985), which has underscored the major contribution of domestic 'reproductive' tasks to capitalist production and accumulation, also calls into question this classic formulation.

Alternatively, one can talk about generalized commodity economies without necessarily implying that all elements are fully commoditized or that the capital/wage labour relationship predominates throughout the structure. Instead, one means that individuals or households cannot reproduce themselves without some involvement in commodity circuits, and that the general 'logic' governing economic life and livelihood strategies is that of capitalism. Thus, even if the forces of production remain at a low level of development, this does not imply that peasant or simple commodity forms fall outside the capitalist domain.

This later view, it seems, fits more closely the empirical situation of contemporary peripheral (and also advanced) economies. It also presents a theoretical challenge to those political economists who attempt to resolve the heterogeneity of third world economies by inventing such strange sociological categories as "disguised proletarians", "potential capitalists", and "wage-labour equivalents" (see Gibbon and Neocosmos, 1985: 169).

Bernstein's third issue concerned the fact that processes of commoditization are often differentiated and uneven in their regional effects. Though affected by similar types of economic change, pre-existing social and ecological systems vary greatly. This, together with the different forms that capitalist penetration may take, has produced a pattern of regionalized production, which has had its political effects as well (cp. Long and Roberts, 1984: 235-257, for a discussion of regionalization in Latin America which led to the

development of regions specializing in the production of specific export commodities, such as minerals, wool, cotton and coffee). Hence some regions became labour-exporting areas, others combined subsistence-based production with the marketing of surplus, and others became highly commercialized and responsive to changing international demand.

Such regional economic systems are not always contained within national boundaries. On the contrary, there are numerous examples of groups maintaining exchanges across international borders. One particularly interesting case is that of the Mambwe of Zambia who, from about the 1920's onwards, became heavily involved in supplying migrant labour to the Copperbelt mines. Recently, urban recession has forced many of these Mambwe workers back to their homeland, where they have now developed a dynamic 'informal' economy based partly on 'trans-territorial' barter exchange with Tanzanian counterparts. These exchanges, involving finger millet and beans, are non-commoditized (although whenever the need arises they can be sold) and operated by women. The system has developed to take advantage of the differential exchange value of these items on either side of the border and is built upon a network of pre-existing marriage and kinship ties that stretch deep into Tanzania (Pottier, 1980).

Bernstein's fourth point emphasized the necessity of considering the role of the state in promoting commoditization, a theme he has explored in previous papers (Bernstein, 1977, and 1981). The establishment of the colonial state and the introduction or consolidation of commodity exchange took place at about the same time. The colonial state played an important role in furthering commoditization through introducing European currencies or standardized forms of exchange-value, through taxation, forced wage labour systems and forced purchase of goods from private company or state-run stores. The precise mechanisms varied but throughout Spanish, Portuguese, Dutch, British and French colonies similar efforts were made to bind rural economies to the workings of the commodity economy and to promote the production of primary products for European markets. Later on, colonial governments took a more developmentalist direction, giving attention to welfare and education, although at the same time they sought to make their colonies financially self-supporting. This led, for example in British Africa, to the setting up of small-scale peasant farmer development programmes producing a surplus for the market.

At the very end of the colonial era in Africa and Asia the World Bank and other international agencies moved into assist. They have remained a dominant factor shaping the patterns of agricultural and national development ever since. Third world political independence merely reaffirmed commitment to national development through increased integration into international commodity and capital markets. The new developmentalist states needed accumulation. This was to be achieved through export production and through stimulating internal demand for consumer commodities. Self-provisioning subsistence production and exchange was thus discouraged: 'production for the market' and 'growth strategies' were the catchwords.

Yet, according to Bernstein, market incorporation led in many cases to increased precariousness in terms of agricultural livelihoods. Many cultivators continued to use simple technology and were dependent on the delivery of inputs organized by government agencies. When these services, such as the provision of fertilizers and insecticides or credit, could not be provided or did not arrive on time, then the whole production process was jeopardized. In addition, there was uncertainty and vulnerability in terms of market prices.

These varying processes, it is argued, have contributed to the transformation of subsistence-oriented, non-commoditized forms of household production and exchange, leading to a more commoditized pattern based upon a cycle of reproduction dependent on the functioning of the market and on processes of capital subsumption. In a recent study of a remote region of the Peruvian rain forest, Chevalier (1982: 117-122) takes the argument to its logical conclusion by suggesting that even those items directly appropriated by the worker, such as land, labour-power and subsistence goods, that do not pass through the market may nevertheless be said to be 'commoditized' (i.e. realise their exchange-value) since their 'calculable value' is transferred to other products which are sold on the market. This argument proposes the same solution to the problem of the apparent persistence of non-commoditized forms within capitalist structures as has been suggested for non-wage domestic labour (see Bennholdt-Thomson, 1981; and my critique of this position, Long, 1984: 8-17).

In concluding his talk Bernstein summarized the main effects of these various processes on Third World peasantries. He suggested that, not withstanding the great diversity of types of peasantry and types

of regional and national situations, one can broadly predict three types of social outcome.

In the first place, the peasant household becomes more individualized in terms of processes of production and reproduction. That is, the operation of the household and family farm acquire a degree of independence from larger social groupings (such as the lineage or local community), and take charge of their own economic decision-making. At the same time, however, the life-chances of the household are shaped more and more by extra-local economic and institutional arenas wherein other similar social units compete for economic benefits. This interpretation is similar to Friedmann's (1981) model of simple commodity production which stresses the process by which producers are brought into direct competition with each other in the market. In a dynamic market situation this will normally lead to more specialized types of production.

The second probable outcome is, as already suggested, increased economic differentiation among peasant farmers. Although the circuits of capital accumulation in peripheral economies are severely restricted, commoditization tends to generate differences of access to productive and other resources that engender social divisions within local society. These divisions are sometimes reinforced by the use which local entrepreneurs make of so-called 'customary' institutions. However, due to the relatively low level of capital accumulation possible and to the high-risk circumstances characteristic of peripheral economies, it is unlikely that this pattern of economic differentiation will consolidate itself in the short term into a firmly established class structure. Classes in peripheral societies are important but their membership is ambiguous, insecure and changing.

These considerations suggest a third outcome for some peasant households, namely the development of diversified economic strategies combining farm and off-farm work. These diversified strategies acquire increasing significance for poorer households whose agricultural production is insufficient to meet their basic needs either in terms of self-provisioning or marketing for sale. On the other hand, diversification also often forms a critical element in the entrepreneurial strategies of the richer peasant classes (for an analysis of this process among Peruvian rural entrepreneurs, see Long, 1979).

Some critical comments on the commoditization approach

The foregoing exposition has attempted to convey the richness of the commoditization approach to agrarian change. Its major theoretical achievement has been to locate the study of peasant and simple commodity production within the framework of an analysis of capitalist economic processes of accumulation, thus showing the shortcomings of both the Chayanovian 'peasant household economy' model, as well as neo-Marxist formulations based upon the concept of the articulation of modes of production. Empirically, commoditization studies have demonstrated the ways in which rural economies are increasingly affected by market incorporation and processes of capital subsumption, leading to the increasing dependence of peasant households on cash income (from the sale of products or from wage labour) and on purchased goods. The above discussion also indicates the kind of future research agenda needed to follow through some of the issues raised by commoditization studies. For example, as Bernstein's comments suggest, we require more systematic comparative studies at regional and local levels, so that we can understand more precisely the effects of different types and combinations of commoditization. We also need to analyse more closely the impact of specific types of state development programmes on commoditization, as well as the latter's effect on welfare levels. This type of research is particularly important in view of the so-called 'food crisis' of the 1980's whereby many third world countries have become net importers of basic foodstuffs that they once exported in considerable volume.

So much for the merits of the commoditization approach, what about its theoretical and empirical limitations?

A strong tendency in much commoditization literature is to posit the destruction of the 'autonomy' of the peasant household. This is frequently expressed by documenting the great extent to which economic decisions (e.g. which crops to grow, whether to recruit hired hands, whether to migrate for work, etc.) are 'determined' or shaped by external market factors. Another line of analysis is to show how capital and outside institutions 'penetrate' the farm, gradually taking control of production processes and decisions. This process may, as Lacroix (1981) and Van der Ploeg (1985) have shown for commercial producers, take the extreme form of delegating most of the repro-

duction (e.g. breeding and seed selection, and soil improvement) and a large part of the production process to external institutions. This is what is called 'externalization'.

Another frequent assumption in commoditization studies is that integration into the wider economic and institutional system leads to the 'individualization' of the household unit, placing the newly 'commoditized' household directly into competition with other similar units which make up the atomistic world assumed to be characteristic of simple commodity production (Friedmann, 1981).

Although each of these observations can be partly confirmed through empirical data, the issues are in fact much more complex and far more interesting analytically. Is the independent decision-making of the household or family farm so inexorably undermined as suggested? Does 'individualization' neatly follow? And are these two tendencies not at odds with each other?

In order to explore these questions, closer attention needs to be given to what we can call 'the management or operational units' involved. Commoditization models often fail to identify precisely the nature of the operational units within which individuals or social groups make decisions regarding livelihood and labour. Although people normally live in households and family groupings, the composition and functions of these vary enormously. It is essential therefore to identify the major types of such units (e.g. nuclear or extended family household, or multi-family or community groupings) and to examine how various commoditized and non-commoditized elements interrelate. There exist major differences in the composition and functions of operational units amongst peasant agriculturalists and pastoralists (for African cases, see Guyer,1981; and for the Andes, see Orlove and Custred, 1980), and considerable difficulties in defining the concept of 'household', which has been used variously to refer to co-residential domestic groups, income-pooling units, property units, or resource-management units (see Wall, 1983). Such structural differences relating to units of production, consumption and exchange will undoubtedly affect the process and degree of commoditization; but as yet there is little systematic work on this theme.

On the other hand, we increasingly encounter situations in which farmers form an integral part of operational units which stretch well beyond household or family groupings to make up horizontally or verti-

cally integrated 'systems of production' based on farmers' cooperatives, state collectives, contract farming, or a network of formal economic institutions such as banks and private firms (see, Benvenuti and Mommaas, 1985, for an account of the system of relationships that envelops the farmer). However, although integration into markets and external institutional structures may reduce the range of economic alternatives available to farmers, the availability of non-wage household/family labour and resources, coupled with the maintenance of local networks based on kinship, friendship or patronage, allow farmers to continue to resolve certain of their livelihood and consumption problems outside the market. As Smith (1986: 101) has recently stressed, commodity-producing peasants obtain many important factors of production (such as land, labour and farming knowledge) through non-commoditized relationships. It is this non-commoditized side of farming practice and household decision-making that often remains inadequately dealt with in commoditization studies (for an exception see Glavanis (1984) who provides a detailed account of the system of borrowing tools, household utensils, animals for ploughing, plots of land, and short term credit among Egyptian peasant farmers; also Bennett, 1986, on informal exchanges among Canadian farmers, and Sik, 1984, for similar patterns in contemporary Hungary).

A related issue concerns the need to look at the responses of peasants from an active rather than a passive point view: the market and other 'external' forces enter the life-worlds of peasant households, opening up or restricting economic choice, but such new factors are, as it were, processed by the peasants themselves. That is, they integrate them into their own farming strategies, and in this sense they retain a degree of independent decision-making. This 'relative autonomy' is principally possible, it seems, because they continue to control how they organize their own labour and how they draw upon various non-commoditized factors of production. Somewhat paradoxically, therefore, one can argue that the actual strength and viability of market-oriented production among peasants and simple commodity producers rests upon a set of non-commoditized relationships (at household, inter-household and possibly supra-household levels). In contrast, the concept of 'individualization' depicts a totally different image: that of 'atomization', which runs counter to the bulk of empirical evidence.

Looking at the active responses of peasants also raises the important issue of peasant resistance to incorporation. Bernstein, for example, has described how African cultivators resisted the establishment of colonial rule in certain parts of Africa. He does not, however, delineate the ways in which African communities and households, almost on a daily basis, attempt to protect certain types of social relationships from becoming commoditized. This process often takes the form of sealing off specific fields of relationships symbolically so that certain social commitments are reinforced or particular resources conserved. For example, in a study of a highland village in Peru, Skar (1982: 215) shows that there is a strong cultural norm against selling basic staples, such as maize and potatoes, which form the core of an inter-household system of exchanges, whereas no such prescription exists for livestock, which are regularly sold to visiting traders. Men of the village also undertake wage labour outside. The latter provides the necessary extra cash with which to purchase items that peasants cannot produce themselves. The 'subsistence' and 'monetary' spheres of the economy are so intertwined that money earned on wage labour may be used to hire daily wage workers to work in the maize fields, although payment, it seems, is used more to secure reciprocity at some later date than to offer a fixed reward for the tasks performed.

This and similar examples stress the importance of examining how non-capitalist institutions and cultural forms may mediate the effects of commoditization. In fact in the Peruvian example, one can argue that "non-capitalist institutions act to restructure the monetary elements introduced into the system, and (that) so long as peasants retain a relatively independent basis for the operation of their economic affairs, then capitalist relations and principles will not (necessarily) prevail" (Long, 1984: 13-14).

This discussion of the interrelations between commoditized and non-commoditized relationships raises, as the above example clearly shows, the much more sticky problem of the role of actors' interpretations and cultural models. Is the fact that bride payments in Africa are now paid in cash an indication that their social meaning or that of marriage has changed? This is a difficult question to answer that requires an analysis of the social behaviour (including the explanations and cultural justifications offered by the actors them-

selves) entailed in the total process of arranging, paying and experiencing the consequences of bride payments. One would also need to explore how the so-called 'commoditization' of bride payments was related to, or compared with, other 'commoditized' forms.

Marx argued that the notion of commodity exchange was on one level a mystification of underlying patterns of social exploitation. That is, the latter were masked by the ideology of 'commodity fetishism'. A similar point has been made with respect to the development of commodity relations among peasantries. A few studies (see, for example, Parkin, 1972; and Taussig, 1980) have explored these ideological dimensions - not always from a Marxist standpoint -, showing how so-called 'traditional' customs or re-interpreted religious notions may conceal the existence of deepening contradictions between classes and thus facilitate the process of capitalist exploitation. At the same time, of course, it is possible to argue that the very persistence of non-capitalist ideologies offers a seedbed for resistance to capitalism itself. It is the co-existence of these contradictory tendencies - 'mystification' versus 'ideological resistance' - that provides the dialectic of commoditization.

In order to pursue these types of issues it is essential to rid the commoditization model of its implicit ethnocentrism. Marx's original analysis of commodity forms and capitalist development was based upon 19th century industrial capitalism. He and later writers (such as E.P. Thompson and Eric Hobsbawm) have demonstrated convincingly that the individuals (workers and capitalists) who experienced this industrial system 'experienced' it in ways that were compatible with the propositions of Marx's general model; but one should not assume that the scheme can simply be transferred to other cultural and historical contexts. Moreover, Marx never adequately theorized about how non-commoditized labour and relationships contribute to the process of capital accumulation. Nor did he give sufficient weight to the ways in which non-capitalist forms may resist the penetration of commodity relations. The analysis of commoditization among peasant populations requires, then, that we give closer attention to documenting and explaining the heterogeneous nature of economic and cultural processes.

Many commoditization theorists lean, I believe, too heavily on a kind of linear view of change. Although they may qualify their dis-

cussions by talking about 'unevenness' and 'local and regional diversity', they fail to go one important step further, namely to acknowledge that local structures are sometimes so resilient that they shape significantly the ways in which capitalist expansion evolves. These local processes, thus, become an important source of variation in the development of commodity relations. Indeed, one can go even further to suggest that external forces are in effect always mediated by local structures (see, Long, 1984): individuals (e.g. peasants and workers) must themselves come to terms with new elements in their life-worlds and they naturally do this on the basis of existing 'world views' and institutional forms.

The role of local structures is in fact much better analysed in the literature on the articulation of modes of production (for a recent example, see, Van Binsbergen and Geschiere, 1985). Whilst there are certain evident theoretical inadequacies in a mode of production analysis (especially its tendency towards functional dualism and its rejection of actor-oriented approaches), it has the merit, I would argue, of paying serious attention to the persistence of non-commoditized labour processes and relationships, and of trying to understand how far these are transformed by, or may themselves shape, the impact of the commodity economy. Mode of production analysis, then, allows for the existence of what Moore (1973) has called 'semi-autonomous' fields of action and for the co-existence and interpenetration of different types of relations of production. Used sensitively it can enable one to understand better the precise ways in which commoditized and non-commoditized forms interrelate.

These, then, are some of the limitations of the commoditization approach. Its more important shortcomings can be summed up as follows:

1. Its view of structural change is one-sided since it accords little room for manoeuvre on the part of those being commoditized;
2. It therefore gives analytical priority to the capitalist side of the equation, reducing local and regional responses to a matter of empirical circumstance and cultural or historical diversity. It fails, that is, to theorize the question of structural variance and differential responses to change;
3. It takes a structural-historical approach to analysis and makes no attempt to integrate into this an actor-oriented perspective which

would allow for a more dynamic understanding of the interrelations between commoditized and non-commoditized relationships;

4. It gives inadequate attention to 'operational' units and processes. If it did so, then the significance of non-commoditized forms, especially the central role played by non-wage labour, in peasant and simple commodity enterprise would be accorded more analytical weight;
5. The failure to appreciate the theoretical importance of non-commoditized relationships for commodity relations leads to an unwarranted rejection of 'Chayanovian' types of explanation;
6. Although the significance of ideology and cultural dimensions is central to Marx's treatment of commoditization, most commoditization studies give little attention to these aspects;
7. A final consequence of these various limitations is that there is a tendency in much of the literature to deny the peasantry a strategic and active role in the process of commoditization itself. As Burawoy (1985:10), commenting on his own experiences as a factory worker, so graphically puts it:

> "Objectification of work, if that is what we were experiencing, is very much a subjective process - it cannot be reduced to some inexorable laws of capitalism. We participated in and strategized our own subordination. We were active accomplices in our own exploitation."

The same must be said of peasants experiencing 'commoditization'.

III. THE AGRICULTURAL LABOUR PROCESS AND COMMODITIZATION

Jan Douwe van der Ploeg

In this chapter I consider the debate on commoditization from two angles. In the first place, I argue that the process of commoditization is, even in the highly developed regions of Europe, far from being uniform or 'completed'. My argument is based upon the assumption that farming constitutes a complex unity of production and reproduction activities involving a wide range of elements that may or may not eventually become commoditized. Thus the degree of commoditization - a concept often discredited in much of the discussions - is brought to the centre of the discussion. Parallel with this argument is the empirical evidence that different degrees of commoditization in fact have very important consequences, both for the management styles operated consciously by farmers, as well as for the way farming as a productive activity is structured and developed. Indeed, I would argue that the degree of commoditization is in effect an outcome negotiated by farmers and other interests.

Secondly, I give attention to the process of 'scientification', which becomes increasingly intertwined with the process of commoditization itself. By scientification I mean the systematic and ongoing remodelling of agricultural practice along the lines of scientific design. It is through scientification that a structure is created that permits capital to gain a more direct control over the labour process in agriculture. Here one can apply to the dynamics of agricultural development Marx's analysis of the making of industrial capitalism and of the role played by science in the shift from formal to real subsumption of labour to capital. The conclusion I reach is that insofar as scientification actually accelerates the process of commoditization, the final result - 'production regimes' that unite farms and agribusiness in specific ways - cannot be analysed simply in terms of

commodity relations. They are integrated into and governed by a new matrix of power relations that expresses itself primarily through technico-administrative relations, through which farming as a labour process is prescribed and sanctioned.

This double critique of the current debate centres upon some weak points of commoditization models. It should therefore be seen as an attempt to correct rather than reject the theory of commoditization. Some of the weak points of the approach which I wish to take up in particular are:

1) The treatment of non-commodity relations as residual phenomena that are mostly identified within family and/or community institutions. In contrast to this view, I will stress the need to consider the persistence, vitality and effects of non-commodity relations in the labour process itself. It is in the commoditized labour process that commodity relations express their specificity. It is also through the labour process that non-commodity relations manifest themselves. It is for this reason that the analysis of agricultural labour processes is central to my argument.
2) The foregoing discussion is interwoven with a second ambiguous point in commoditization approaches, namely the actual role played by farmers in the process of commoditization. As Long points out in Chapter 2 of this volume, the commoditization literature tends "to deny the peasantry a strategic and active role in the process of commoditization itself".
3) Finally I wish to stress another weak point: the inability of commoditization theory to account for differential processes at national, regional or farm level. It is, in my view, the specific combinations of commoditization and scientification that account for much of the European diversity one observes. One can also argue that the specific combinations of farmers' strategies and commoditization, viewed as an historical and structurally differentiated process, explain to a large extent the inter-farm differences we find within a given farming population.

Let me end this introduction by making clear that the emphasis on scientification and commoditization does not mean that one can neglect the analysis of politico-economic phenomena. On the contrary, it is increasingly through scientification and commoditization that various

social interests and power groups come into opposition in an attempt to promote their own ends. It is through these processes, too, that the State attempts to intervene and direct the pattern of agricultural development.

My argument makes use of Italian data, but not simply to question or replace theoretical formulations with empirical induction. The problem one faces is that commoditization models often adopt a strictly deductive form of reasoning (most notably by Gibbon and Neocosmos, 1985; and Bernstein, 1986), which ipso facto excludes serious consideration of substantive findings. Hence the 'theoretical space' necessary for the interpretation and conceptualization of relevant empirical phenomena - mostly, I would suggest, pertaining to the sphere of so-called non-commodity relations - is simply eliminated or denied. Only in this way can one explain such apparently extreme statements as "the extension of commodity production is historically complete" (Bernstein, 1986:36), and that, therefore, "it is not even meaningful to talk of differential commoditization" (Gibbon and Neocosmos, 1985:165).

The empirical illustrations presented in this paper, serve then, to indicate why and how these "closed" deductive models should be opened up so as to allow a more meaningful understanding of processes of agrarian transition. I include in the latter the responses and strategies of farmers towards processes, which, especially if seen through these "closed models", seem simply to overwhelm them.

On the complexities and dynamics of farming

In this section attention will be focused on the complexities of the farm labour process. This is discussed at three levels. First, farming is viewed as a unity of production and reproduction activities. Second, I analyse the different tasks involved in production and reproduction, emphasizing the continuing need to coordinate these various tasks vis-à-vis each other. This analysis raises the question (sometimes posed in Marxist writings) of whether the agricultural labour process, particularly among simple commodity producers, is to be considered as "intrinsically backward". Third, I examine the need for farmers to coordinate the domains of production and reproduction with

other relevant domains, such as those of the family and local community, or of the wider economy and institutional system. My aim here is to indicate some of the mechanisms by which the labour process is connected with (and eventually structured by) non-commodity relations and/or clusters of commodity relations.

This discussion of the complexities of farming is inspired by what I consider to be inadequate treatment of the agricultural labour process in current commoditization literature. Only by neglecting the complicated sets of relationships linking production with various reproductive processes or by ignoring the double coordination between specific labour tasks and between different social domains, is it possible to arrive at general models that exclude from serious consideration farming strategies and the problem of degrees of commoditization.

On the unity of production and reproduction

Following Marx's characterization of the basic elements involved in the labour process, farming can be considered as the continuous interaction of 'labour force', 'objects of work' and 'instruments', where the specificity of farming is given by the fact that the 'objects of work' are made up of living organisms such as livestock, crops, trees, and soil. This interaction of elements is partly oriented towards the production of values to be exchanged (e.g. in the form of milk, grain or fruit) and partly consists of the material reproduction of the elements themselves. It is through the labour process then that not only the 'objects of work', but also the 'labour force' and 'instruments' are reproduced. In this way production and reproduction are closely interrelated and interdependent.

This interaction between production and reproduction is nicely illustrated by one of the most prosaic factors of production - dung, thus occasioning Marc Bloch's comment that "agrarian history smells of dung"! In the first instance, dung is a product of the process of production (at least as far as animal production is concerned); then (and excluding pastoralists who use it as fuel for cooking or as a preservative for cheese) it is converted through the application of farm labour into an 'instrument' in the form of natural fertilizer to be used to replenish the soil - a reproductive function [1]. Once

converted into natural fertilizer it may also be offered for sale. Hence, apart from the reproduction of soil fertility, dung may be used for the reproduction of the 'labour force', directly through its use as fuel for cooking, and indirectly through exchanging it for other products for family consumption or for cash. It should also be noted that it may be converted into an 'instrument' directly used in production as is the case with some herding peoples who burn it in order to repel mosquitoes from their herds.

In farming, then, production and reproduction are closely interconnected. Their precise interdependency - and therefore whether one classifies the particular elements as final 'products', 'instruments', or 'objects of labour', or whether one considers particular labour tasks as pertaining to the domain of production or to that of reproduction - is, of course, time- and location-specific. Areas and epochs differ in terms of their social relations of production through which the labour process is constituted. But whatever specific form the labour process takes, the basic interaction of production and reproduction must be secured.

The coordination of different tasks

Within the general framework of production and reproduction a huge range of different tasks can be distinguished. The number and content of these tasks is dependent on the type of specialization (e.g. wheat growing, dairy farming, or horticulture) and also on the level of development of the productive forces[2]. Wheat growing - one of the more 'simple' specializations that embraces relatively few tasks - is made up of some 400 separate decisions, each being of direct relevance to the level of production realized (i.e. yield per acre) or the costs involved. Each decision (or group of decisions) concerns a well defined cluster of tasks, such as the preparation of the soil, application of fertilizer, selection of adequate cultivars, sowing or pest control. Each of these broad categories synthesizes an interdependent cluster of more detailed tasks. The preparation of the soil, for instance, entails the elaboration of a scheme for crop rotation, ploughing, harrowing and cultivating as well as the maintenance of drainage and (possibly) irrigation systems. All tasks must be timed to

match specific climatic conditions, and so on. The crucial point is that the execution of each task is basically dependent on maintaining a balance between all tasks[3)].

The coordination of tasks is therefore strategic in the organization of the labour process, and hence in the development of agricultural production. Consequently, the unity of mental and manual work (as opposed to their separation), as well as the direct control by the producer over the immediate conditions under which production is realized (as opposed to external control and determination of these conditions), are essential to the farm labour process. Through it farmers acquire the capability to develop the productive potential of their farms, which, in my opinion, is one of the decisive advantages that simple commodity production (SCP) has over capitalist production in agriculture. The unity of mental and manual labour as well as effective control by the direct producer over the labour process are - though in varying degrees - present in simple commodity production, while they fall outside capitalist production, characterized as it is by the relation of capital to wage labour.

Both Friedmann and Bernstein stress the viability of simple commodity production in agriculture. But neither of them relates it to the labour process as such, nor to the different conditions that structure the labour process in simple commodity production as against capitalist farming. Friedmann (1978:563) relates the "competitive advantages over capitalist production" to the lack of a structural requirement for profit and to the flexibility of personal consumption in simple commodity production. Bernstein (1986:22) maintains that the "conjunctural superiority" of small-scale commodity production in agriculture at particular historical periods is due to "technical and social (market) conditions". Both, it seems, exclude the possibility that simple commodity producers develop the labour process (and hence, the productive potential of farms) beyond the limits inherent in capitalist farming. Effective possession of the means of production and control over production and reproduction probably account for this difference: all over the world small-scale commodity producers (be they peasants or farmers) realize yields (or levels of material productivity) considerably higher than those typical for capitalist farming (as abundantly documented by Feder, 1973; Jacoby, 1971; Van der Ploeg, 1976; and, as far as Italy is concerned, by Brusco, 1979; and

Bolhuis and Van der Ploeg, 1985).

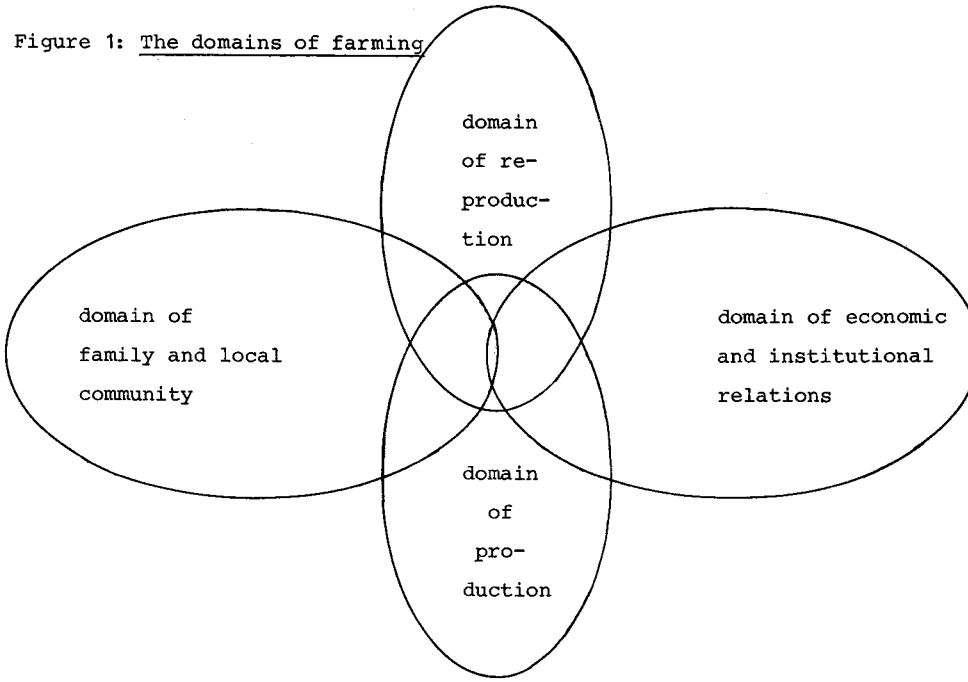
A related point is made by Gavin Smith when he argues that "SCP may gain much of its competitive edge from the use it makes of the non-commodified social relations in which it is enmeshed", suggesting therefore that "the developmental characteristics of SCP are as much to do with non-commodified characteristics as has hitherto been suggested for its commodified characteristics" (1985:99, my emphasis). Gavin Smith develops his argument through an analysis of the role of peasant communities in Latin America, which he categorizes as representing particular clusters of social relations of production. It is through the community and its institutions that access to land, inter-household labour, technology, credit and so on, is determined. In the analysis that follows I apply a similar line of reasoning but focus instead on the social relations in production [4] rather than on access to factors of production. I illustrate my argument by reference to modern European farming. My conclusions coincide closely with Smith's view that the developmental characteristics, and hence the competitive advantage, of simple commodity production is largely due to its non-commoditized elements.

Farming as the ongoing coordination of domains

In addition to the coordination of tasks within the framework of production and reproduction, there is another level of coordination, namely that which articulates the domains of production and reproduction with other social domains [5], such as that of the family [6] or that of the wider economic and institutional system within which the farm is embedded (see Figure 1). Although in most cases production is essentially commodity production and the farmer has to cope continuously with markets, we should not simply identify the domain of economic and institutional relations with existing markets and marketing agencies. We must consider the full range of external relations which farmers maintain with a number of different types of institutions (e.g. credit, extension, and farmers' organizations) and economic arenas. Furthermore we will need to specify for different farm units the precise relations existing with particular markets and agencies. Like production, the domain of economic and institutional relations

must include the farmer as actively engaged in dealing with these relations: enlarging them, deepening, correcting, transforming, resisting or reversing them.

Figure 1: The domains of farming



Such an approach is implicit in many empirical studies of modern agriculture. As Newby et al. (1978:73), for example, put it: "The overall economic position of farmers is by no means a unitary phenomenon, but has to be divided into several analytically separate components. For the farmer is not a participant in a single market, but in several, sometimes as seller, but also as buyer, his position being an amalgamation of varying situations, in various markets". The matter is further complicated, as Bennett shows by the fact that farmers economic activities do not depend exclusively upon markets. In his study of Jasper, a wheat growing region of Canada, he concludes that "while Jasper farmers do produce solely or mainly for the market, their economic behaviour is not confined to this activity. They exchange goods and services among themselves, and these exchanges are governed in part by nonmarket or nonmonetary considerations (...). Despite market systems, economic behaviour among entrepreneurial operators can acquire many of the characteristics of nonmarket systems"

(Bennett, 1982:16 my emphasis). The existence of non-market exchanges, even within 'modernized' agriculture, raises the theoretical issue of the significance of variability among farmers in their use of specific economic and institutional resources and relations.

The domain of economic and institutional relations is thus important for understanding the coordination of production and other activities. If labour is, for instance, difficult to mobilize in external markets, or through wider non-market mechanisms, or if the farmer is not willing for some reason to use existing possibilities, then the domain of production has to be carefully coordinated with the domain of the family household so that the demand for labour arising in the domain of production is carefully regulated in accordance with the supply of agricultural labour from the household. It was precisely this axis of coordination that was investigated by Chayanov (see Curtin's contribution to this volume).

A similar argument can be developed for the interrelations with other domains. In fact, the bulk of agrarian sociology has been concerned implicitly or explicitly with these types of interrelationships, their conditions, consequences and dynamic. What must be stressed, however, is that coordination between different domains is in no way reducible to a simple 'functional' adjustment. Coordination implies some transfer of meaning from one domain to another: only in this way can the different activities be directed in a meaningful way. Different domains evidently evoke different normative frameworks. The 'logic' of the market transmitted to the farmer via the domain of economic and institutional relations is not the same as that reigning for instance in the family: they can coincide to a certain degree but they may also differ markedly. Hence the "good entrepreneur" as defined within the normative framework of economic and institutional relations often turns out simultaneously to be a "bad neighbour" as far as the family and local community are concerned. As Moerman (1968:144) expresses it, "those who .... use the market more efficiently than their neighbours, are the villagers who, for these and other reasons, are criticized as calculating, aggressive and selfish ... , In the eyes of their fellows they are sons of bitches". The same may occur in the domain of production since its imperatives and cognitive structures may not necessarily overlap or coincide with the normative frameworks of other domains. Thus the interaction of diffe-

rent domains entails the interplay and management of different value systems. It rests with the farmer to put together or reconcile these different normative elements. Inherent in such an operation, I believe, is the selection of one of the frameworks as a rationale or set of organizing principles for the interpretation and active management of the others. Consequently, it is precisely through the balancing and operation of these, in some respects quite contradictory sets of normative frameworks, that transfer of meaning from one domain to another is realized.

In a recent research project [7] this transfer of meaning was explored. Farmers were confronted with a list of actions that in one way or other could be regarded as relevant for farm development. The list itself was simple. The relatively new feature of the study was that it not only contained elements derived from (or applicable to) the strict domain of production - as is normally the case in studies of so-called goal functions - but also embraced possible changes within the domain of institutional and economic relationships.

After asking the respondents to rank order these elements according to their own criteria, factor analysis was applied. This showed that the overall strategies defined by these farmers existed in well coordinated and simultaneous 'steps' in both domains. Whilst it was theoretically possible to formulate strategies that considered only or basically the domain of production, farmers themselves operated from the beginning with the principle of mutual coordination between both domains. The basic strategies that emerged - considered as meaningful plans for action which entailed the coordination of tasks across domains - were: a) the desire to obtain subsidized credit (without the normal delays) so as to enlarge the farming area, to mechanize more heavily and to expand production; b) the attempt to integrate the farm more systematically into agribusiness, leading to greater involvement in its system of technical assistance and advice, in order to realize important cost reductions on the farm level.

It is noteworthy (but not surprising) that farmers defined their own development strategies (at least in part) as a function of external changes. Hence changes in the domain of production were seen by them as related to the way in which they handled the other (increasingly decisive) domain of institutional and economic relationships. At the same time it must be emphasized that dealing with external agenc-

ies (e.g. coping with the bank or government agencies to obtain loans or technical advice) was in no way neutral to activities in the domain of production or reproduction. Through this coordination specific meanings were transferred. Hence it was found that the use of credit was not associated for instance with an increase in the process of intensification but with a pattern of farm development based upon scale-enlargement and/or cost-reduction. And in this way certain normative and cognitive elements associated with the banking circuit and/or agribusiness were translated into a specific style of farming. Thus, changes in the domain of economic and institutional relations had their effects on the structuring of farm labour.

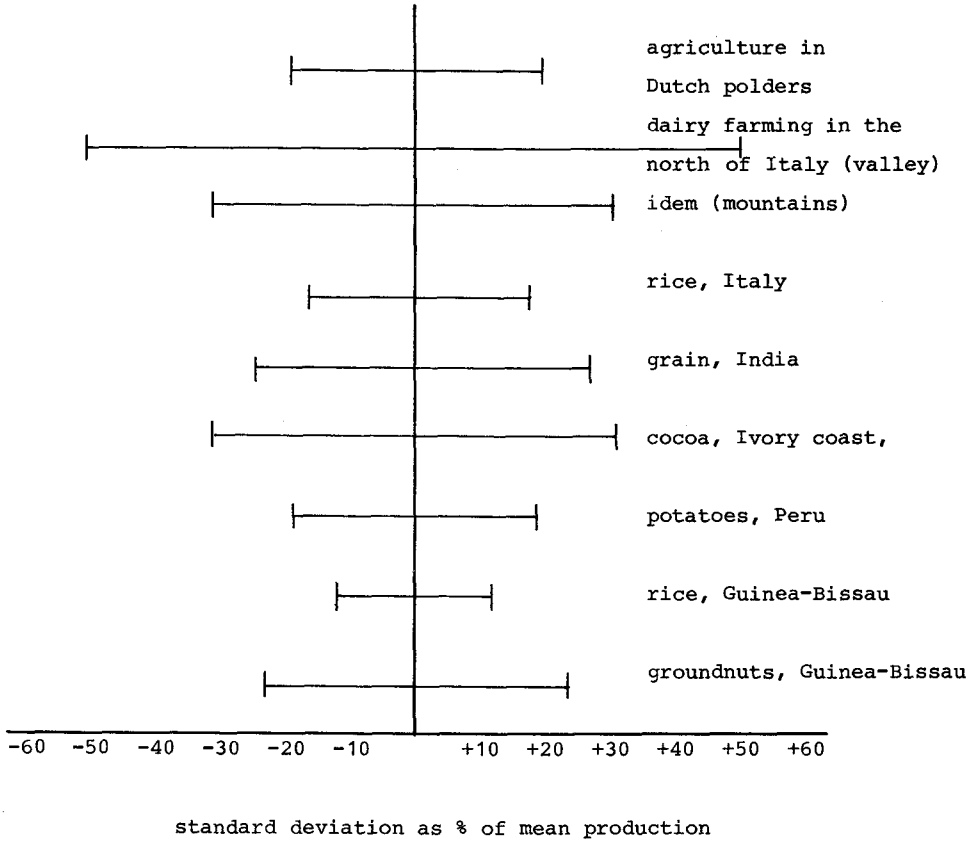
This transfer of meaning from one domain to another which shaped farm strategies was not distributed randomly over the farming population. It emerged that those farmers who (for whatever reason) saw their farm enterprises as embedded in a dense network of economic and institutional relations were also those who, more than others, developed strategies that defined farm development basically as a function of external change. Such farmers tried wherever possible to adjust their farm operations to meet the exigencies of the wider structure.

The elements discussed so far highlight one basic feature of farming, namely its heterogeneity. Whatever indicator is used, there is in every agricultural system considerable variation, take yields for instance, as a case in point. in yields. This is illustrated in Figure 2, which shows the pattern of variation around the average level of realized yields for several agricultural systems. This variation is to a considerable degree the outcome of the different ways in which the labour process is structured. It reflects, that is, different patterns of coordination between domains and, thus, different patterns of task definition and execution, and a different balance between production and reproduction activities.

Externalization, reproduction and commoditization

So-called 'modernization' of agriculture frequently follows the route of externalization whereby an increasing number of tasks are separated from the farm labour process and reallocated to external agencies. This process is shown schematically in Figure 3 which takes

Figure 2: Diversity of yields in several agricultural systems



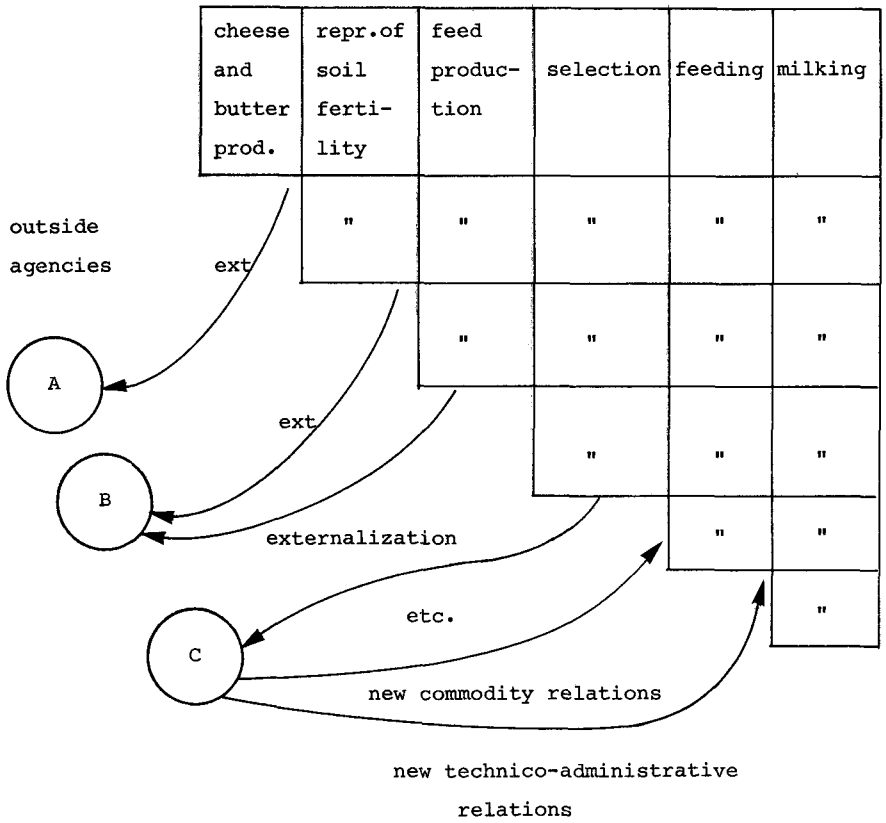
Source: Bolhuis and Van der Ploeg 1985:22)

as an example the situation of dairy farming.

The outcome of this process is a growing division of labour between industry and agriculture, as well as between different productive units within the agricultural sector itself. But in contrast to industry, where a considerable part of the growing specialization and division of labour takes place within the factory itself (and therefore does not imply a major increase in commodity exchange), agricultural development usually implies a process of externalization which generates a multiplication of commodity relations. Tasks that

were initially organized and coordinated under the direct command of the farmer himself, must now be coordinated through commodity exchange and through the newly established system of technico-administrative

Figure 3: Externalization, growing division of labour and the multiplication of commodity- and technico-administrative relations



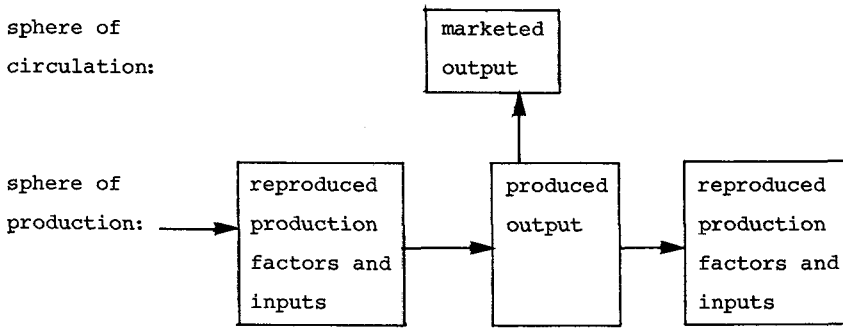
relations. This increasing externalization not only affects production activities but results also in a complete reshaping of the process of reproduction.

This is illustrated by material reproduction. Agricultural production presupposes a continuous reproduction of labour, objects of

labour and instruments. Their reproduction is not only strongly connected with production, it results from the production process itself. It is through production that soil fertility is reproduced and that genetic material (cultivars and animals) is reproduced [8]. Likewise, milking and calving cannot be done independently of each other.

This reasoning can be extended to cover all relevant factors of production and inputs. Figure 4 presents an hypothetical scheme of reproduction in which the market simply operates as an outlet.

Figure 4: autonomous reproduction

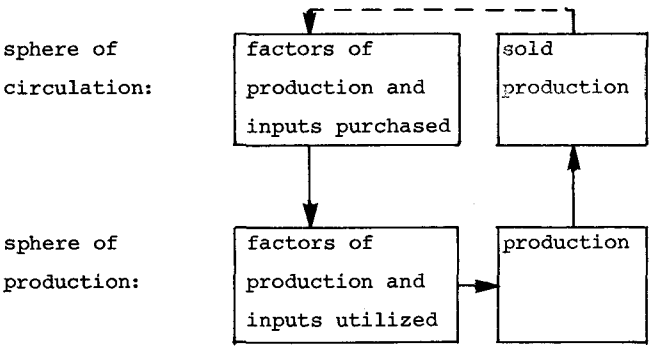


Without denying the strategic role that this market outlet can play, the autonomy of reproduction vis-à-vis markets should be underlined. The process of reproduction does not in any systematic way pass through markets [9]. Factors of production and inputs are not mobilized through market relations, i.e. they do not enter the process of production as commodities. Their availability at the beginning of a new cycle of production is given and their character determined by a variety of specific mechanisms of mobilization and allocation. For illustrative reasons one should add that land is mostly inherited through the family and enlarged by marriage; labour is often supplied and reproduced through community institutions; capital often functions as 'family capital' and is reproduced through savings (typically not through loans); and the main objects of labour (e.g. livestock and seed) as well as most inputs, such as hay and dung, are reproduced

through the labour process itself. Hence the factors of production and inputs with which the new cycle of production begin, are not commodities, they have use-value[10]. They enter the process of production as use-value, as products of previous labour (Marx 1974:176), although this does not of course deny the fact that the farmer operating the scheme depicted in Figure 4 is a simple commodity producer producing for the market. However, he produces, mobilizes and utilizes use-value partly in order to realize exchange-value and partly to initiate subsequent cycles of production (Marx, 1974:191).

When increasing externalization of tasks takes place and reproduction entails increasing involvement in exchange relations [11], the very objects of labour, instruments, and progressively labour as well, enter the process of production as commodities, thus having simultaneously both use- and exchange-value. In this way commodity relations penetrate to the core of the process of production and begin to commoditize the labour process itself. Figure 5 shows this process by which exchange circuits and agricultural reproduction become interrelated.

Figure 5: Market dependent reproduction



It is important to emphasize that these two schemes of reproduction are theoretical constructs and should not, therefore, be confused with particular empirical situations and/or with 'historical phases'. However, by comparing them we can draw the following conclusions about the structuring of farm labour:

1) In Figure 4, depicting relatively autonomous reproduction, the availability of factors of production and non-factor inputs is already given, whereas with market-dependent reproduction (Figure 5) the quantity of factors and inputs is flexible and broadly follows market logic [12].
2) Each figure generates different farm 'management styles', market-dependent reproduction being associated with short-term planning, whilst in autonomous reproduction there is a longer time perspective since every cycle of production requires the creation of the basis for future cycles.
3) Another basic difference is that 'technical efficiency' is crucial to autonomous reproduction since progress can only be achieved through the slow increase in the relation between 'given' factors of production and inputs on the one hand, and the realized production on the other. In contrast, market-dependent reproduction leads to a different management of resources. Since the quantity of capital, labour, inputs, and sometimes even land is flexible - in the short as well as the long run - and such initial production 'costs' are to be valorized [13], production is organized in order to obtain optimum levels of 'economic' rather than 'technical' efficiency [14].
4) As a consequence of the foregoing elements, production under autonomous reproduction tends to develop along the lines of increasing intensification. It is through the complex interlinking of processes of production and reproduction that the quality of labour and means of production are augmented, leading to increased yields per object of labour; whereas with market-dependent reproduction, production develops along the lines of an ongoing scale-enlargement, whereby the number of objects of labour per producer is increased but yields stagnate or lag behind.

So far I have outlined two contrasting patterns of reproduction that are distinguished by their degrees of externalization. This difference raises the important, though largely neglected, theoretical problem of the significance of differential degrees of commoditization. As I pointed out earlier, Bernstein (1986:36) argues that the extension of commoditization is historically complete; and Gibbon and Neocosmos state "that the conditions of generalized commodity pro-

duction are satisfied when individuals are unable to exist and to reproduce themselves outside of circuits of commodity economy and divisions of labour generated by the capital/wage labour relation and its contradictions" (as summarized by Bernstein, 1986:11). Indeed Gibbon and Neocosmos (1986:165) propose that "there are only two 'degrees' of commoditization: systematic or generalized commodity production, or occasional and non-generalized commodity production, which is not effectively commodity production at all". Thus the only 'degree' they actually recognize is that of generalized commodity production, which is characterized by "the fact that once peasants (or anyone else) systematically produce commodities they are all controlled - by definite and precise forms of capitalist regulation which act as the absolute limits of their activity" (1986:165).

Apart from the problematic nature of focussing exclusively upon individuals rather than on the labour process, the above statements on the theoretical impossibility and/or historical superfluousness of uneven levels of commoditization run counter to the basic nature of agricultural labour processes. This can be demonstrated by reviewing once more the complexities of farming already outlined.

Farming involves many different elements that are normally subsumed under the abstract categories of capital, land and labour. This abstraction however should not obscure the heterogeneity and variety of concrete elements involved, especially where, for most of them, reproduction (and consequently also the degree of commoditization) may follow rather different patterns. Gavin Smith correctly observes "that if by domestic labour is meant the non-commoditised labour provided by members of the household, then very rarely does this delimit any other of its (non-commoditised) social relations of production" (1985:100). Thus objects of work and instruments are also frequently - and systematically - mobilized through non-commodity mechanisms and allocated according to a non-market logic. This is not a plea for a kind of "moral economy", as Caroll Smith (1984) accused Gavin Smith of making in his earlier work, but simply to recognize that social relations of production are not limited to economic phenomena and even less to the world of commodities.

A second cluster of complexity arises due to the fact that reproduction is many-sided and is not limited to the reproduction of the

labour force alone. Material and social reproduction of other elements of the labour process are at least as important. It is precisely at this point that current commoditization models fall short. Such models largely ignore or delegate to a 'secondary level of analysis' the reproduction of the social relations of production that shape the labour process. This is especially notable in the work of Gibbon and Neocosmos, but also in both earlier and later papers by Bernstein [15].

A final source of complexity is to be found in the labour process itself. This process involves, as I suggested earlier, the simultaneous or chronological execution and coordination of different tasks. This coordination implies the control of the direct producer over the labour process itself. Yet unlike industry, where capital was able to eliminate the need for control by workers through restructuring the labour process and creating divisions between 'manual' and 'mental' work, in agriculture capital has been largely unable to achieve this. Such a shift in control (from farmer to agribusiness) has, up until recent developments, been quite impossible to realize, due to the complexity of the labour process and to the capacity of farmers to defend their control over it.

We can conclude, then, that if these structural complexities making up the labour process are overlooked, then the complete matrix of commodity and non-commodity relations in which farming is embedded will consequently disappear from the analysis.

A taboo reconsidered: "degrees" of commoditization

In Bernstein's earlier work (1979) the theoretical problem of the 'historically completed' process of commoditization remains unresolved. Within simple commodity production he distinguishes a two-fold process of reproduction: "the simple reproduction of the producers and (of) the unit of production" (1979:425). The latter he argues entails the "incorporation of commodities in the cycle of reproduction as items of productive consumption (e.g. tools, seeds, fertilizers)". And he goes on to suggest that "it is useful to ... distinguish the various ways in which, and degrees to which, peasant production is constituted ... through commodity relations" (429). Such 'degrees' should then be elucidated in terms of the (differential) "intensifi-

cation of commodity relations", a concept that links peasant production with the wider social division of labour, its relation to industry and so on. Thus, as he explains, "at the level of household economy the intensification of commodity relations refers to the degree to which the reproduction is realized through the production and exchange of commodities". A surprising and contradictory element however is introduced by the fact that Bernstein states simultaneously that "simple quantitative measures which might show, say, that only 20 per cent of labour time or 20 per cent of land is devoted to commodity production, are misleading". In a later article based on "family farms of the North American and Western European 'type', which may also (sic) exist in certain agricultural branches of some Third World economies" (1986:16), Bernstein returns to this same issue introducing the concept of differential commoditization, based on the assumption "that the extension of commodity production is historically complete (...) but that its intensification is not" (1986:36 my emphasis).

This juxtaposition of "extension" and "intensification" of commoditization is, I believe, inadequate and contradictory [16]. So long as the "intensification" of commodity relations implies an increasing social division of labour (between agriculture and industry for instance, and between different units of production within agriculture), this will, as I stressed in the foregoing discussion on externalization, inevitably result in different "extensions" or "degrees" of commoditization on the level of the units of production (see Figure 3). And it is precisely these "degrees" of commoditization that can be identified through the kinds of simple quantitative measures that Bernstein rejects. Even if production is a hundred per cent commodity production (as illustrated in Figure 4), the degree of commoditization of the labour process may vary considerably, depending upon whether or not the reproduction of the various elements of labour process (i.e. the material reproduction of the objects of work, 'instruments' and 'labour force') are commoditized. Empirical studies in fact demonstrate time and time again the considerable variation that exists around the 'mean' pattern of commoditization. This is illustrated in Table 1 which shows the degree of commoditization for various factors of production and non-factor inputs for a sample of North Italian dairy farms. Operationalization of 'degrees of commoditization' follows the lines already indicated. That is, calculations

were made for each factor of production or input for each unit of production, indicating the segment mobilized through the market, as against that part reproduced within the farm. The degree of commoditization was then measured in terms of the proportion of resources mobilized through the market as against the total of these resources applied in the farm. Needless to say this formula can be used both for single factors or inputs of production as well as for the whole range of farming resources. The degree of commoditization thus reflects the degree to which commodity relations penetrate the labour process and production. A high degree of commoditization would thereby indicate that the factors of production and non-factor inputs enter production as commodities and are valorized according to market criteria. Obviously the degree of commoditization for a given farming population is never uniform, but will vary considerably. This pertains not only to Italian dairy farming (see Table 1) but also to Peruvian potato farming (see Figueroa, 1982; Tupayachi, 1982; and Bolhuis and Van der Ploeg, 1985).

Table 1: Averages and standard deviations for eight indicators of degrees of commoditization among North Italian dairy farms

Involvement in the market for:	Lowlands		Mountains	
	M%	(s)	M%	(s)
Labour	9.1	(22.8)	0.1	(0.4)
Contract work	30.7	(28.5)	10.0	(12.5)
Credit, short term	4.6	(16.3)	1.9	(10.4)
Credit, medium term	11.1	(50.5)	3.4	(10.8)
Credit, long term	2.4	(3.4)	2.4	(7.6)
Land	28.7	(37.8)	20.2	(30.2)
Fodder and feeds	43.8	(18.2)	37.8	(16.7)
Cattle	7.2	(9.0)	7.6	(11.1)
Overall degree of commoditization:	26.0	(15.0)	15.1	(8.3)

This table brings out a number of points:

1) There are in fact systematic differences in the overall as well in the individual indicators of degrees of commoditization for the

lowlands and mountains. These differences reflect general politico-economic tendencies, the impact of specific agrarian policies as well as the relative 'success' of scientification which encounters more favourable conditions in the plains of the Po Valley than in the ecologically and socially more heterogeneous mountain area.

2) Notwithstanding the overall trend, both agricultural regions contain a remarkable variance at the level of individual indicators. Some farms tend towards high market-dependent reproduction, showing therefore very high degrees of commoditization; whilst others are characterized by very low levels of commoditization.

This last observation fits with the general assumption that, at least in agriculture, commoditization cannot be conceptualized in terms of a unilinear pattern of development. Even in so-called 'highly developed' agricultural sectors one finds a large number of farms functioning on the basis of non-commoditized processes of reproduction. On the other hand so-called 'traditional' agrarian societies may, in several respects (particularly in relation to markets for labour, capital and genetic materials), sometimes exhibit far more commoditization. Another pattern is that illustrated by the agrarian history of Holland which manifests remarkable periods during which farmers have striven actively to reduce commoditization, - not only because they saw it as a channel for exploitation by merchant interests, landlords and the urban elite, but also because they evaluated it as an obstacle towards independent farm development. Prior to these periods of farmer emancipation, many of these agrarian populations were heavily committed to commodity exchange. For example shiploads of dung destined for external markets left the Province of Frisia, and the same applied to animal feed (notably hay) and to the export of pedigree cows and bulls. Land was also mostly allocated through the market by means of short-term tenancies and much labour was wage-based. Then, in the mid 19th century these trends were reversed as farmers struggled to liberate themselves from the power of other classes. This took several forms (as indicated by Spahr van der Hoek, 1952): the deliberate reduction of farm size to become independent of the wage labour market; struggles within farmer organizations in order to replace the dominance of landlords and the urban elite; a short siege of Harlingen

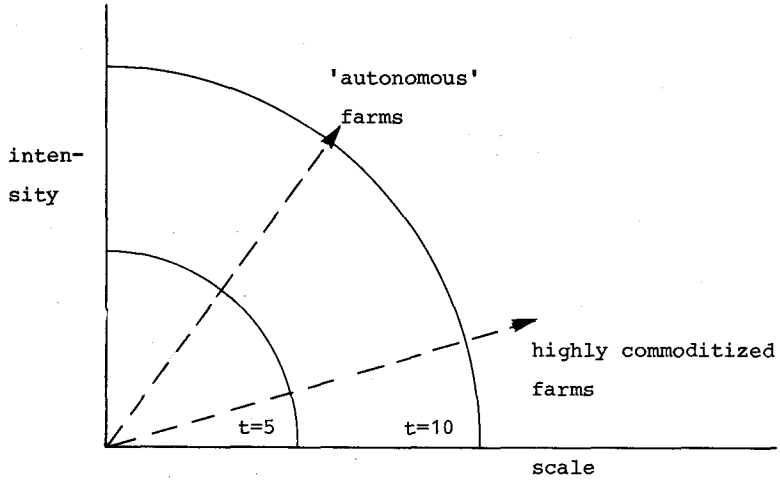
harbour to impede the export of certain commodities; attacks on locally-based state institutions, and the development of agricultural cooperatives to counterbalance the interests of merchant capital. The historical outcome of these processes was a notable 'de-commoditization' of factors and inputs of production, leading, among other things, to the rapid and substantial development of livestock production based upon new forms of farmer-controlled cattle selection and breeding.

A second taboo: dynamics versus "intrinsic backwardness"

Let us return to draw some further conclusions from the Italian data. The above differences in the degree of commoditization affect significantly the way farming is carried out. Relatively autonomous forms of reproduction are associated with a production process that is structured around a high level of craftsmanship which results in increasing intensification of production; whereas market-dependent reproduction leads to strategies, based upon highly developed forms of entrepreneurship, leading to a pattern of scale enlargement and more extensive forms of production. In this context 'entrepreneurship' is defined as the capacity to tune the process of production to the types of commodity relations that penetrate it, while 'craftsmanship' signifies the capacity of labour to develop the productive potential of its objects of labour (Bolhuis and Van der Ploeg, 1985). Craftsmanship therefore presupposes effective possession of the means of production, effective control over their interaction, effective share by the direct producers of the returns on production, and finally a close association between 'mental' and 'manual' work. All these conditions can be achieved within small-scale commodity production, and in sofar as they are met, they comprise those relations of production that allow for autonomous peasant- or farmer-generated development of the productive forces. On the other hand, this development of productive forces can, for several different reasons, be slowed down, distorted or even prevented completely. One way in which this happens is through the process of externalization and subsequent multiplication of commodity relations. We found, for example, in Italy (and one could document a similar pattern for Peru, see Bolhuis and Van der Ploeg, 1985)

that increasing commoditization of reproduction induced a shift in the developmental patterns of farm units. This process is depicted in Figure 6: over time farms exhibiting high levels of commoditization tend to increase their scale of farming, whereas farms possessing a certain autonomy vis-à-vis markets (i.e. characterized by low or very low degrees of commoditization) are able to develop craftsmanship and realize, consequently, an increasing intensification of production.

Figure 6: Historical paths of expansion for different types of farms



At this point it seems worthwhile to indicate another ambivalence in Bernstein's work (most notably in his 1979 article), an ambivalence strongly associated with the problem identified earlier, namely the apparent contradiction between "degrees" and "intensities" of commoditization. He writes about the "intrinsic backwardness of simple commodity production in peasant agriculture" (1979:436, my emphasis), while at the same time stressing that struggles take place between capital, the state and the peasantry over "effective possession of the means of production and effective control of the production". One wonders, then, why peasants are struggling at all if they have only an "intrinsic backwardness" to defend.

On the other hand, one of the most promising elements of Bernstein's work is, I believe, his suggestion that "the content of the relations between peasants and capital has to be related to the

struggle between the direct producers and capital over the conditions of labour in the sphere of production, and over the distribution and realisation of the value of the product" (1979:432, my emphasis) [17]. And he adds to this the crucial observation: "This struggle is possible only because the producers have not been fully expropriated and capital does not control production directly" (ibid, my emphasis). Thus so long as the direct producers control to a considerable degree the process of production (i.e. so long as no real subsumption of labour to capital is realized), then they stand to defend a very substantial interest, that is the possibility of being able to structure their labour processes in accordance with their own interests and perspectives. To develop the productive forces in such a way that at least a part of the benefits derived accrue to them is essentially different from the typical industrial situation where these forces are developed to permit increases in production, entailing the appropriation of surplus value by the capitalist class.

This possibility of maintaining effective control over the process of production is, of course, associated with the degree of commoditization: the more tasks that are externalized (i.e. the more social division of labour that is taking place in agriculture) the narrower becomes the domain controlled by the direct producer himself. Also the more externalized and commoditized becomes the process of production, the more the domain of production has to be organized so as to tie in with commodity exchange within and between different markets. Hence the logic of the market becomes the rationale within those domains formally controlled by the peasant or farmer himself. This leads me to argue, in more theoretical terms, that in so far as an "intrinsic backwardness" arises as an historical reality, it should not be analysed simply as a generic outcome of simple commodity production. Rather it should be conceptualized as the specific outcome of the struggle occurring between capital, the state and the peasantry over effective possession and control. Although this is not the place to elaborate such a thesis, I would suggest therefore that the present-day apparent "backwardness" of Sub-Saharan agriculture, which contrasts so sharply with the earlier dynamics described by Boserup (1965) and others, is in large measure an outcome of such an unequal power struggle.

Anyway, two major corrections are necessary as far as existing

commoditization models are concerned: Firstly, "backwardness" should not be considered generic to simple commodity production. Rather the balance between "dynamics" and "backwardness", and the way this changes over time, must be interpreted as an outcome of the struggle between the major actors involved. Secondly, it should be recognized that a considerable part of this struggle manifests itself through the process by which commoditization is extended [18].

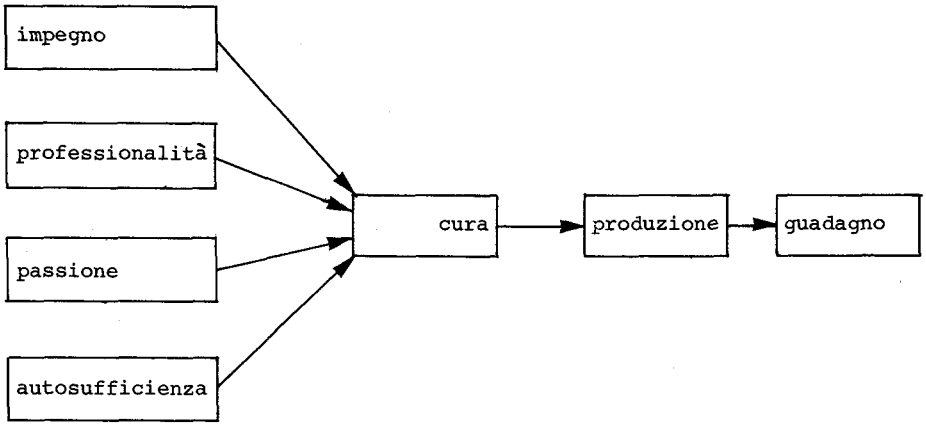
A third taboo: the farmers' role

Providing the extension of commoditization is conceptualized as the outcome of the struggle between capital, the state and agricultural labour, then the question of the strategies used by farmers in order to accelerate, modify, neutralize, resist, or reverse the overall tendencies of increasing commoditization (often of course promoted actively by state agencies) becomes a theme of major interest.

We can illustrate such differences in farmer strategies once again by examples taken from Italy, where we find two contrasting patterns. Such farmer strategies can be conceptualized as coherent patterns of interconnected folk concepts used by farmers to interpret (and perhaps, eventually, to change) the conditions under which they operate, and to structure their labour process. Needless to say these strategies arise within a specific politico-economic environment and reflect particular class relations. I cannot here, however, take space to provide details on this.

The first strategy, summarized in Figure 7, using farmers' folk categories sets a clear goal: produzione (high yield levels) which is to be reached through cura (the type of labour process associated with highly developed craftsmanship). Under this strategy, autosufficienza (material autonomy vis-à-vis markets) is regarded as a crucial condition; the same applies to professionalità (farmers' professionalism) which emphasizes that the farmer himself should accumulate and develop the necessary knowledge to reach cura, instead of being dependent on outside knowledge systems. The remaining concepts (impegno and passione) underscore the strong commitment and motivation by the family labour force towards its work despite the lack of direct market or price incentives.

Figure 7: The strategy of 'autonomous' farm management



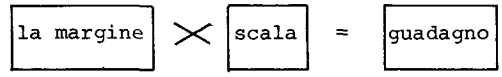
in which guadagno is "income"
cura is "craftsmanship"
produzione is "yield-level"
impegno is "hard and dedicated work"
autosufficienza is "autonomy"
professionalità is "farmers' professional knowledge"
passione is "love for the work"

Farmers aim, through operating this strategy, to avoid (or to correct) increasing commoditization, which they see as incompatible with the desired mode of farm development which stresses the intensification of production (produzione) through the development of craftsmanship (cura), rather than simply increasing the use of commoditized inputs.

The second farmer strategy contrasts markedly with the first. Here we find a positive evaluation of high degrees of commoditization. Indeed the structuring of the labour process is defined essentially as a function of the supremacy of commodity relations. Figure 8 depicts this strategy, using once again current folk concepts.

Such a strategy, needless to say, tends to increase the degree of commoditization. This is acceptable and supported by the farmers themselves, although, at the same time, its implementation may generate its own new kinds of contradictions.

Figure 8: The strategy of market-dependent farm management



la margine is price/cost relations as determined by the market"
scala is "scale of operation as determined by technological level"
guadagno is "income"

Beyond commoditization: the establishment of 'production regimes' in agriculture

Although reproductive and productive tasks can to a considerable degree be transferred to outside agencies (as illustrated in Figure 3) and although this process creates a de facto separation of production and reproduction (as discussed by Lacroix, 1982), the need for continued coordination of the tasks, now organized in terms of a deepening social division of labour, remains. But, from being initially an activity realized on the farm by the producer himself, this coordination now takes the form of a set of interrelations between agribusiness, farmers and state agencies. It goes without saying that it is through these interrelations that different social interests are expressed. What is at stake, then, as Benvenuti (1985:225) puts it , is "the everyday negotiation of the role-definition and role-enactment of farmers". According to him, this negotiation may "form the main vehicle through which farmers' integration into widening systems of dependence is accomplished".

=> The relations between agribusiness and farms are commodity relations as much as they are what Benvenuti terms "technico-administrative relations". As the latter become increasingly important, so they form a matrix that eventually begins to govern the types of commodity relations that evolve. As certain tasks are externalized, they are replaced by products or services mobilized exclusively through exchange relations. These products or services, however, are no longer produced on the farm and so knowledge on how to use them (what Lacroix calls "le mode-d'emploi") is communicated by industry (or some other agency), not generated by the farmer himself. This is how technico-administrative relations emerge. Crucial to the understanding of these relations is that, in the end, they turn out to be the vehicle through which farm labour is actually prescribed and eventually sanctioned.

This is especially so because the different tasks are interrelated and therefore coordinated. If outside agencies define certain tasks (for instance, through the 'mode-d'emploi' for industrial feed), they will also determine indirectly other tasks that formally speaking lie within the farmer's own responsibility. Hence the balance constructed between the various tasks becomes subject to the technico-administrative relations that tie together agribusiness and farm labour. In this way a specific regime of production [19] is created whereby outside agencies define what to do, when, how, and by whom. As several case studies (Nienhuis, 1982: Benvenuti, Bolhuis and Van der Ploeg, 1982; Benvenuti and Mommaas, 1985) have demonstrated, it is through these types of regimes that real subsumption of farm labour to capital takes place. These studies also highlight another theoretically relevant dimension, namely that these new regimes of production effectively restructure commodity exchange such that those farmers who submit themselves to industrial or agribusiness imperatives receive higher remuneration (through differential price mechanisms that favour them). Furthermore, under these regimes the ability of farmers even to react to changes in commodity relations is substantially reduced or even eliminated.

In a recent contribution, Goodman and Redclift (1985:240-241) conceptualize "capitalist development of agriculture as the competitive movement of industrial capitals to create sectors of valorisation by restructuring the inherited, 'pre-industrial' rural labour process". What I call externalization, they term "appropriation" - a concept that somewhat obscures the active role played by farmers in this process. According to Goodman and Redclift, "Industry has progressively appropriated activities related to production and processing which at earlier conjunctures were regarded as integral elements of the rural land-based production process". A problem however arises in their argument when they suggest that these 'appropriated' activities can be identified with "real subsumption" of agricultural labour to capital - thus maintaining simply that the "survival of farms.... is the measure of the (current) limits of real subsumption" (1985:241).

Apart from this somewhat Leninist statement, such an interpretation seems to me to be basically incorrect in that it fails to recognize that the 'remaining' tasks carried out on the farm are often

organized strictly in accordance with the parameters, logic and procedures defined by outside agencies. Real subsumption of agricultural labour arises not so much where capital 'appropriates' certain activities, but where it starts to monopolize the control of the labour process on the farm, such that this labour process cannot be reproduced anymore outside the reach of capital. This is precisely what is happening in contemporary production regimes organized through a dense network of technico-administrative relations. As in the making of industrial capitalism (see Braverman, 1974), science, or more precisely the specific use capital makes of science [20] plays a strategic role in this real subsumption of agricultural labour to capital. This, as I suggested earlier, is what we call scientification, the modelling of agricultural labour processes in accordance with scientific criteria. Here one can add that it is through scientification that capital gains its increasing control over agricultural production. Farming is restructured in such a way that real subsumption becomes reality, not 'outside' the farm - as Goodman and Redclift seem to suggest - but in it.

Different aspects of this interaction between commoditization and scientification can be distinguished:

1) Scientification as materialized in technological development results in an increasing externalization and therefore in a multiplication of commodity relations.
2) Commoditization leads to an increasing standardization of farm labour processes which creates the foundations for further scientification, standardization being a crucial pre-condition for any scientific design. In addition, it can be argued that only in comparison with some notion of a standardized labour process can technological models be shown to have a certain superiority.
3) Commoditization and scientification, founded as they are upon an increasing externalization, entail the emergence and reproduction of technico-administrative relations. This is even more the case where the 'remaining tasks' on the farm become subjected to scientific design aimed at achieving a better interaction with external parameters. Hence real subsumption of agricultural labour to capital is a direct product of scientification.

The interaction of commoditization and scientification is, for various historical and politico-administrative reasons, most developed in

Northwestern Europe and in certain areas of the United States (see Gregor, 1982). This convergence gave rise to a completely new type of farm, termed in Europe, "the vanguard farm", and in the United States, "the industrialized farm". The operation of such farms cannot be understood except in relation to the sets of external relationships that compose their particular type of production regime, where the "logic of the market" is replaced by the "logic of technology". What remains in terms of economic calculation is characterized, by orthodox agrarian economists, as a "fuite en avant". This "logic of technology" heralds the emergency of a new production regime based upon the scientification of the labour process.

Let me make clear that this final observation is not inspired by, nor grounded in, any kind of technological determinism. It is founded upon the insight that the actual relations between capital, the state and farmers are such that now the former can best serve its interests by controlling the development of science-based technology and by encouraging farmers to internalize this perspective in their farming strategies. Thus, in some parts of Europe and in the United States, the epoch of simple commodity production in agriculture has already passed, making the real subsumption of agricultural labour by capital an undeniable fact.

Conclusion

Throughout this chapter I have tried to bring out the importance of the concept of simple commodity production for developing a relevant programme of research. In the first place, it points to the need to examine empirically the matrix of commodity- and non-commodity relations as they exist in particular concrete situations in which farming is embedded. Second, farm labour processes must be explored in order to determine the differential impact of these relations. This implies, among other things, a careful analysis of the forces governing the balance of "progress" and "backwardness" in agriculture. Finally, farmers' responses and strategies should be acknowledged as being crucial to the formation of any concrete set of commodity relations. Indeed, it is partly through the handling of these relations that farmers play their role in the "struggle between direct

producers and capital".

This programme of research becomes - on the conceptual as well as on the methodological level - even more complicated when we have to integrate into it a new politico-economic tendency: the scientification of the agricultural labour process through technological developments controlled by capital. The need to integrate this new tendency into the analysis is particularly urgent since this tendency implies drastic changes in the nature, extension and impact of commodity relations.

These considerations underlie my critique of some current trends in commoditization theory which seem to block or to distort certain fruitful lines of research, rather than to strengthen and develop them.

NOTES

1) According to another great expert on European agrarian history, Slicher van Bath (1960), considerable progress in material production was realized through improved dung application . His detailed study of yield-ratios concluded that agrarian history consists of three major themes: dung, dung and more dung!

2) This does not imply any linear relationship between level of development and complexity. In fact the relation between the two are quite contradictory: whereas, on the one hand, an increase in the quality of farm labour leads to the definition of an increasing number of tasks, on the other hand, the actual process of 'modernization' implies a growing shift of tasks to outside agencies. Both these elements will be elaborated later on.

3) In this respect it should be emphasized that virtually no task is determined by physical and/or technical parameters (see Van der Ploeg, 1985). Each task is characterized by a certain range of alternatives concerning its precise definition and subsequent realization. Take ploughing for example: even if the type of plough and available horsepower are already 'given' (i.e. determined by earlier decisions), the depth and width of the furrows and precise routes across the field (which will, in the medium run, have important consequences for the gradient of the field and its productive potential) will still have to be defined. In short, ploughing can be done in different ways, and, apart from the balance to be maintained between ploughing and other tasks, there is no a priori 'correct' way of ploughing. The 'correct' way is highly actor-dependent.

4) The distinction between social relations in production, as opposed to the social relations of production, is elaborated by Burawoy (1985:29).

5) The concept of domain is used to delineate the 'fields of activity' (Vincent, 1977) in which farmers are engaged. Each domain can be considered as being subjected to labour, a broader concept than 'work, which is normally associated simply with the domain of production.
Although this is not the place to elaborate on such problems, it is important to indicate the problematic nature of the 'boundaries' of these domains (that is to say the boundaries can be changed as an effect of farm labour itself, as Lacroix (1982) has made clear), as well as the problem of the 'overlap' of domains as illustrated in Figure 1.

6) The family and rural community are amply discussed by Chris Curtin in Chapter 4 of this volume. Here I focus attention basically on other domains, although this does not imply that the domain of the family is less significant.

7) Called "Guastalla 2" and directed by Benvenuti. The results of this research will be published shortly.

8) This argument can be extended: it is through their control over reproduction, as well as through the carefully observed, evaluated, and (re-) organized unity of production and reproduction, that farmers can obtain improvements in the quality of labour, objects of work and instruments, as well as an increasing 'mastership' over the interaction between these elements.

9) Lacroix (1982) and Bolhuis and Van der Ploeg (1985, especially Chapters 2

and 3) demonstrate that this scheme can be maintained to a considerable degree even when agricultural production becomes partly dependent on industrial inputs,such as chemical fertilizer, tractors and so on.

10) Marx explained that for the owner "his commodity possesses for himself no immediate use-value. Otherwise he would not bring it to the market. It has use-value for others; but for himself its only direct use-value is that of being a depository of exchange-value, and, consequently a means of exchange" (1974,89). This is evidently not the case in agriculture, as far as major factors of production such as land are concerned. Since the 1950's every Dutch farmer, possessing a medium or large farm, could have improved his income by simply selling his land, and living off the interest of his invested capital. But they did not. For them their land was not primarily "a depository of exchange-value".

11) "It is only by being exchanged that the products of labour acquire, as values, one uniform social status, distinct from their varied forms of existence as objects of utility" (Marx, 1974:79).

12) Friedmann's formulation concurs with Figure 5. She views generalized commodity production as full commoditization of all factors of production, implying complete mobility of these factors, a mobility that is achieved through the markets and governed by the "logic of the market" (Friedmann, 1980).

13) Since 'economic efficiency' expresses basically an exchange relation between 'benefits' and 'costs', "this exchange puts them in relation with each other as values, and realises them as values" (Marx, 1974, I, 89).

14) It should be remembered here that, at least as far as the extremes are concerned, technical and economic efficiency are rather antagonistic to each other (for Italy, see Messori 1985).

15) "That different types of peasant production (and other PCP including that in advanced capitalist countries) may incorporate non-market relations and mechanisms of allocation is, presumably, a strictly secondary consideration for the generic conceptualization of PCP" (Bernstein 1986:19, my emphasis).

16) This confusion seems to be strongly related to two other rather weak points in Bernstein's reasoning. Although on a theoretical level the distinction is frequently made between production and reproduction, in his analysis of specific social formations reproduction is only considered in so far as reproduction of the labour force is concerned - an issue that is simply reduced to the circuits through which the necessary items for "direct consumption" by the worker (1979:426) are mobilized. This is especially the case in the 1979 article where a discussion on the "extent of commoditization" is simply resolved by reference to the ratio of subsistence, and cash crop production. Bernstein argues that situations in which food needs are satisfied on a regular basis by purchase are characterized by a more advanced social division of labour in which some peasants specialize in the commercial production of food. Consequently we find differences within the farming population that are reflected in different degrees of commoditization. So, what is negated at a theoretical level, reappears in his empirical analysis. Hence the "degree" (or extension) of commoditization on the one hand, and "intensification of commodity relations" (understood as an expression of the social division of labour) on the other hand, go hand in hand, making

observations concerning the percentage of the labour force dedicated to cash crop production (or to food production) highly relevant and theoretically justified.

17) "The site of capital-peasant relations is in the first place in the struggle over the conditions of production (Bernstein 1979:435).

18) In a recent contribution to the commoditization debate, Goodman and Redclift (1985) come quite close to this point when they interpret the process of externalization and the emergence of commodity relations that tie farming to agribusiness as "appropriation". Their interpretation, however, entails a number of analytical shortcomings that I will discuss later in this chapter.

19) This concept is derived from Burawoy's (1985) recent comparative study of factory regimes. According to him, "alongside the organization of work - that is the labour process - there are distinctive political and ideological apparatuses of production which regulate production relations. The notion of production regime .... embraces both these dimensions" (Burawoy, 1985:8). One could argue that Benvenuti's concept of TATE (Technological Administrative Task Environment) - although still rather heuristic - is the first systematic outline of the now dominant 'regime of production' in modern agriculture (see Benvenuti, 1982; and Benvenuti and Mommaas, 1985).

20) In the 'Braverman debate' the initial and rather functionalist conception of the interrelation between science and capital has been replaced by a more dynamic interpretation in which the "structural affinity" between the two is emphasized (see Christis, 1985).

IV. THE PEASANT FAMILY FARM AND COMMODITIZATION IN THE WEST OF IRELAND

Chris Curtin

Introduction

In the debate on how small-scale primary production is to be understood conceptually much attention has focused on Chayanov's theory of peasant economy. In this theory three interrelated elements stand out: the emphasis on the internal logic and distinct rationality of the peasant farm; the stress on demographic as opposed to social differentiation; and the claim for the long-term viability of peasant family farming. In this paper I wish to test the validity of these propositions in the context of change and development in West of Ireland agriculture. The applicability of the 'peasant model' has given rise to some controversy in Irish sociology, in particular in the conflicting interpretations of the classic community study Family and Community in Ireland by Arensberg and Kimball.I begin by outlining the main issues in this debate and then examine in turn the utility of each of the Chayanovian propositions. I conclude that on its own Chayanov's theory fails to offer an adequate explanation for structure and change in West of Ireland agriculture but, combined with an approach which gives weight to macro-economic and institutional factors, it can facilitate an understanding of the processes of social reproduction of small-scale primary producers in the West of Ireland.

Family and community in Ireland: critics and supporters

A pioneering social anthropological study in the British Isles was that by Arensberg and Kimball who described the social life of small-scale farmers in the Irish countryside of County Clare. This study was

completed in the early 1930's and one book The Irish Countryman was published in 1937. A second and more comprehensive account entitled Family and Community in Ireland was published in 1940 (2nd edition 1968). These works constitute the principal publications from Harvard's Department of Anthropology Programme of Research in Ireland under the direction of Ernest A. Hooton, a programme which also included research in physical anthropology and archaeology. The background to the Arensberg and Kimball study was the emerging concern to test anthropological field methods in complex societies. Thus, in the preface to Family and Community in Ireland, Lloyd Warner writes: "if we are to develop a full grown comparative science of man, the communities of modern life must be included among those studied by anthropologists" (xiii). One of the authors' aims was to place southern Ireland on the roster of comparative sociology (xvv). Arensberg and Kimball also sought to locate their work within the theoretical perspectives of functionalism, which was emerging as a dominant paradigm in anthropology. In the introduction they explain that the more they worked, the more they grew certain that to a certain approximation it was useful to regard society as an integrated system of mutually interrelated and functionally interdependent parts. A study in Ireland would then provide a means to test this hypothesis (xxx) [1].

The method utilized by Arensberg and Kimball closely followed that recommended by Radcliffe-Brown who argued that the best way to understand a society was to select a very small area, examine it carefully, compare it to similar units studied in a similar manner and proceed to draw generalizations (Freedman, 1963:3). Lloyd Warner and Arensberg had come to Ireland in 1931 in search of a study site. They chose three small areas in County Clare, a county where they suggested "there was a blending of the older Gaelic and modern British influences and one that was neither entirely English nor Gaelic in speech" (xiii). Lloyd Warner returned to the USA and was replaced by Kimball in 1932.

While Arensberg and Kimball's interests were essentially micro in nature, they were neither unaware of nor disinterested in macro factors. They use the 1926 census to isolate what they regard as the two dominant groups in Irish rural society, the large and the small farmers. The differences between these 'classes', they suggest, is not just in the amount of property owned but also in levels of technology,

land use and dominant forms of farm labour. Thus the large farmer typically cultivated nothing but a 'kitchen garden' for household use, preferring to maximize the land's grazing capacity, and was heavily dependent on machinery and hired labour. The small farm, on the other hand, was characterized by a mixed economy, producing oats, rye, potatoes and cabbage, and caring for hens, geese, chicks, pigs, cows and some beef stock. Labour on the small farms was almost entirely familial and there was a low level of dependence on machinery. Large and small farmers thus inhabited separate social worlds, which were connected only by the cattle trade between the two groups.The areas studied by Arensberg and Kimball were dominated by 'small fellows'.

The authors describe in detail the internal structure of the small farm household which was characterized by a strict division of labour and authority along age and sex lines. The father directed the enterprise and was assisted by his wife and children. He performed all the 'heavy' farm work and trading activities. His wife was usually confined to the domestic sphere and to the farmyard where she was in charge of hens and butter making. This division of labour was believed to represent the natural order of things, and recurred over a whole range of activities. The aim of the small farm was self-sufficiency. Tasks such as hay-making and harvest work that could not be performed by the household, were completed by inter-household co-operation known as 'cooring'. Incomplete households were at a disadvantage in not being able to participate fully in these exchanges. The more general form of communal co-operation - 'the meitheal' - was said to be in decline at this time and "monetary hire was spreading into the country communities". Links between the farm and outside world were few, confined to occasional trips to town and to weekly Sunday mass. The farm household was not active in any voluntary or formal communal organizations.

This rural community of small farm households was maintained by a number of devices of which the most important was a form of arranged marriage known as 'the match'. Marriage united "the transfer of economic control, land ownership, reformation of family ties, advance in family and community status, and entrance into adult and procreative sex life" (1968:103). Property control and ownership were at the core of the social structure. A central purpose of marriage was to perpetuate the name of the land. The incoming bride brought with her a

dowry, whose function was to allow the old couple to assist the non-inheriting siblings, ideally, Arensberg and Kimball suggest, by subsidizing their training for one of the professions but more usually for financing permanent emigration. Once the non-inheriting children had dispersed the way was clear for succession, which involved the establishing of the 'new couple' in the household, producing the next generation and the retirement of the 'old couple' to the 'west room'. The class structure of the countryside was relatively uncomplicated. Farmers were far and away the dominant and numerically prominent group. Industrial activity, or what there was of it, tended to be confined to the towns and even those craftsmen who supplied the countryside were in-creasingly located in the market towns. Only the smith, tailor, weaver and mason survived in the countryside in any significant numbers. Farmers were in a dominant position in relation to these latter who were regarded as a 'cut below' the farmers. Another group, whose representatives included the shopkeeper, policeman, schoolteacher, priest and the big farmer, were the representatives of urban standards and were considered a 'cut above' the farmers.

The ethnographic validity of Arensberg and Kimball's account went unquestioned for thirty-three years. Later studies "demonstrate either an implicit or explicit acceptance of the model and ethnographic accuracy of the original Clare study" (Wilson, 1984:3). In 1973, in his critical review of H. Brody's Inishkillane: Change and Decline in the West of Ireland, P. Gibbon queried the accuracy of their thesis and ethnographic description. The overriding theme in Brody's book is the intense demoralisation affecting rural Ireland. As he says in the introduction, "it is the breakdown of communities, the devaluation of traditional mores, the weakening of the hold of the older conceptions over the minds of the young people in particular, to which every chapter will return"(1973:2). This breakdown is set against the vibrant picture of community life painted by Arensberg and Kimball. By and large, Gibbon accepts Brody's ethnographic description but rejects the novelty of the changes listed by him: the eclipse of community, individual isolation, the demise of patriarchialism and the dominance of the cash economy. Thus he writes:

> "The fact is, therefore, that none of the novel 'changes' in Irish rural society which Brody identifies is novel at all. All that they are novel in relation to is rural Irish society as it was

romantically depicted by Arensberg and Kimball. Arensberg and Kimball's functionalist theoretical position produced an account of the Luogh which had more in common with the visions of obscurantist nativists and revivalists than with concrete reality. On every score - the family, the 'mutual-aid' system, the economic and cultural stability of the system, and its politics - their account ranges from the inaccurate to the fictive" (1973:491).

Gibbon also rejected Brody's explanation for change, i.e. the modernization of Irish society since the 1950's and the unequal distribution of the 'benefits' of this process. He prefers instead to take a long-term view of change and directs attention to the steadily increasing hegemony of the commodity economy:

"Larger farms; decline of tillage; specialisation in capital-intensive livestock production. The pattern is clear enough. The middle peasantry has been in a state of dissolution as a group for over seventy years. The vicissitudes of its majority and the upward social mobility of its minority have for the entire century underlain the most striking features of this society, namely the undermining of the status, security and ideology of this group. It is not necessary to go outside Ireland to understand this process or its basis, since it is no more than the local form of the development of capitalism in agriculture."

In 1977, in a paper presented to the Irish Sociological Association, D. Hannan rallied to Arensberg and Kimball's defence [2]. He opens with all guns blazing stating that "there is incontestable evidence for the existence of a clearly deviant peasant economic and social-structural pattern in the 1930's" (1978:56). He begins by using some very loose descriptive terms such as a "relatively isolated economic and socio-cultural system" or a "closed but dependent or subsumed economic and socio-cultural system" and then more formally introduces the elements of the peasant model whose applicability to the West of Ireland he suggests had been contested by Gibbon. These are a subsistence family-based economy, where "only a small proportion of what is consumed is purchased" (1978:50); the importance of neighbourhood and kinship ties and class relations that "do not flow from relations of production (1978:57); stem family and impartible inheritance and the importance of local descent groups. In support of the existence of this 'peasant system', Hannan points to regional differences in marriage and inter-

generational replacement rates - these were higher in the poorer Western and Southern regions - and to the possibility of explaining these differences by reference to a 'deviant' peasant cultural system. He concludes:

> "there appears to be no doubt that quite variant value systems existed in rural areas of Western Ireland up to the late 1940's or early 1950's. To understand or analyse this system - or its residues - a peasant model appears to be the most fruitful one. And in analysing its transformation - a model which stresses the increasing integration of peasants into a national and world system and their gradually cumulating disenchantment, that pays attention to the diffusion of market relations and to the increasing significance of exchange, that emphasises the gradual marginalisation of small subsistence producers and the effective declassing of their children, - appears to be still the most relevant model" (1978:61).

Both Gibbon and Hannan, then, appear to agree on the implications for peasants of incorporation into a capitalist world market. What they disagree on is the timing of the change.

The remainder of the paper examines the utility of three elements of Chayanov's theory for understanding structure and change in West of Ireland agriculture, which, I believe, goes some way to resolving the debate between Hannan and Gibbon. The outcome of this 'test' is the suggestion that it is only by combining aspects of both Hannan and Gibbon's approaches that an adequate picture of change and development in the West of Ireland can be constructed.

The specific rationality of the peasant economy and long-term processes of commoditization

Chayanov's position is that peasant economy constitutes a "special economic system where land, labour and means of production are combined following a natural process of family development" (Archetti and Aass, 1978:115). The degree to which peasants exert themselves is determined by demand satisfaction and the drudgery of labour (Chayanov 1966:6). Thus Chayanov writes:

> "The subjective evaluation of the values obtained by this marginal

labor will depend on the extent of its marginal utility for the farm family. But since marginal utility falls with growth of the total sum of values that become available to the subject running the farm, there comes a moment at a certain level of rising labor income when the drudgery of the marginal labor expenditure will equal the subjective evaluation of the marginal utility of the sum obtained by this labor. The output of the work on the labor farm will remain at this point of natural equilibrium, since any further increase in labor expenditure will be subjectively disadvantageous. Thus, any labor farm has a natural limit to its output, determined by the proportions between intensity of annual family labor and degree of satisfaction of its demands" (1966:81-82).

This emphasis on peasant subjective utility/disutility offers, in the case of West of Ireland peasants - and I would suggest also in other historical instances - at best only a partial explanation for economic behavior. The problem arises in the theory's almost exclusive focus on internal mechanisms and subjective factors in explaining the 'rationality' of the peasant farm. In the Irish case we need to acknowledge the dependence of the farm household on external factors, in particular on the flow of commodities. The notion of an independent peasant family farm with a specific rationality cannot be sustained, since the prices of commodities entering and leaving the peasant farm are not determined within that farm alone (Littlejohn, 1977). Indeed, as Bernstein (1979) has observed, the reproductive cycle of peasants invariably passes through the market. This manifests itself both at the level of the 'economy' and the 'household'.

The successful colonization of Ireland involved the appropriation of communally-held clan lands as private property, and the pursuit of profit derived from landownership has dominated Irish society ever since at least the 18th century (Crotty, 1984:104). Irish agriculture was very responsive to external demand, which filtered down to the very lowest levels of society, affecting the cottiers or sharecroppers through the pressure applied by landlords wishing to extract an income from rents. The 'market' was a central mechanism in regulating the agricultural productivity of the whole island. Indeed the very existence of the cottier class owes much to the change in external market demand for butter, pork and grain, a demand which Crotty points out

"originated either principally in England, either directly or triangularly via the West Indies, where Irish provisions fed the slaves growing tropical products for the English market" (1984:106). The impact of the cash economy at this time is documented by Johnson who writes that farmers in the West of Ireland derived money income from livestock sales, from the domestic linen industry, from illicit distillation of whiskey, and from seasonal harvesting on large farms (1970). The incorporation of West of Ireland peasants into both national and international markets is evidenced by both their supply of cheap labour to British farmers (Collins, 1976; Fay, 1947; Otwathaigh, 1972) and by the development of a rural-based linen industry (Almquist, 1977). While the trend of recent historiography has been to de-emphasize the importance of the great Famine as a watershed in favour of a gradual increase in commercialization over the entire century, the majority of writers agree that commercialization proceeded rapidly in the West of Ireland in the latter decades of the nineteenth century. Historians have viewed this western commercial expansion as being facilitated by a general improvement in communications [3]. For example, Board of Works relief projects, introduced with the aim of providing employment and cash incomes were among other things concerned with the construction of roads and buildings and the upkeep of canals and waterways (Lyons, 1971:81). Cullen argues that "the railway helped to further a commercial revolution that already showed signs of taking shape before their appearance. They brought goods cheaply to the retailer and, without them, wholesalers in provincial towns could scarcely have prospered at all" (1972:2). Lee contends that railways opened up the countryside to a range of consumer goods and in particular aided the export of cattle from the West of Ireland (1969, 381-382). Other factors facilitating western commercialization, noted by historians, include the banks. The number of banks in Ireland increased from 165 in 1850 to 304 in 1870 to 809 in 1910 (Lyons, 1971:158). Bank deposits increased from 5 1/2 million pounds in 1840 to 60 million pounds in 1914 (Lee, 1969:60). By the end of the century, Cullen noted that "cash incomes rose appreciably ..... deposits in post office savings banks in Counties Donegal, Sligo, Roscommon, Mayo, Leitrim, Galway and Kerry rose from a quarter of a million pounds in 1881 to 2 1/2 million pounds in 1912" (Cullen, 1972:152). And the general diffusion of the retail sector, particular-

ly in the Western part of the country, has been amply documented by Kennedy (1978:46-63).

The market responsiveness of Irish agricultural producers is evident in the post-1820's in the sharp rise in cattle and sheep exports. Between 1821 and 1870, exports of cattle increased by 600 per cent and sheep by 1200 per cent in response to the changing agricultural price ratio (Crotty, 1966:277). Following Nerlove's (1958) model, which argues that farmers do not respond to all price changes but rather to those which are expected to be permanent, O Grada presented measures of supply elasticity during three periods, 1850-1879, 1880-1909 and 1897 - 1926, for six agricultural commodities - mutton, flax, barley, wheat, oats and eggs. His conclusion was that Irish agriculture in the nineteenth century was "rationally" organized. In another study, O Grada (1973) compared supply elasticities for the above products, and for pigs, for five "modern" and five "traditional" western counties over the period 1848-1878. He argued that the results indicated a "rapid and substantial response to price change and substantial uniformity (across counties) in response patterns".

In order to measure the degree of market orientation at farm level, Cuddy and Curtin (1983:173-184) have examined two sets of figures, based upon the reports of the inspectors of the Congested Districts Board and on published agricultural statistics. Each baseline report of the CDB board included a budget which, in the view of the inspector making the report, was a fair representation of the economic activity of a typical family farm whose land had a rateable valuation of 4 pounds. The level of commercialization was estimated by using 'the sale of farm products ratio, that is, the proportion of farm products sold as against those consumed (Wharton, 1970). Danhof has suggested that a farm can be identified as 'market integrated' if the household consumes no more than 40 per cent of its net product (1979:127-191). Applying this criterion shows that farm households, including the poorest strata, were highly commercialized (see Table 1); that the larger the farm, the greater the level of commercialization (Table 2); and that commercialization ratios were strongly influenced by the extent to which households were engaged in livestock production (Table 3). If, as Chayanov argues, peasants tend to select the crop that gives more days' work, even if it pays less per day (Durrenberger, 1984:11), then the West of Ireland case is an ex-

ception, since the shift from tillage to pasture was associated with wide spread unemployment and depopulation (Kennedy, 1973:90-92).

Table 1: Commercialization ratios for farms of approximately 4 pound valuation in selected Poor Law Unions in 1891

	Boyle	Carrick-on Shannon	Castle-bar	Dingle	Donegal	Glena-maddy	Kenmare	Millford
(a)	0.65	0.64	0.68	0.72	0.49	0.62	0.69	0.52
(b)	0.86 (15-30)[1]	0.81 (5-15)	0.77 (15-30)	0.81 (30-15)	0.85 (15-30)	0.71 (5-15)	0.84 (15-30)	0.79 (15-30)

	Mohill	Skibbereen	Skull	Sligo	Strokes-town	Tubber-curry	Tuam	Westport
(a)	0.54	0.75	0.70	0.72	0.68	0.62	0.65	0.76
(b)	0.77 (5-15)	0.87 (15-30)	0.84 (15-30)	0.84 (5-15)	0.78 (5-15)	0.82 (15-30)	0.7 (5-15)	0.81 (15-30)

(a) Derived from Baseline Reports, Congested Districts Board, 1898.
(b) Derived from Irish government agricultural statistics, 1891
1. Size of farm (in acres) with approximately 4 pounds valuation (farms classified by valuation were mapped into farms classified by size).

Table 2: Livestock sales as % of total sales on farms of approximately 4 pounds valuation in 1891

Boyle	Carrick-on Shannon	Castlebar	Dingle	Donegal	Glenamaddy	Kenmare	Millford
.58	.66	.61	.52	.44	.51	.56	.36

Mohill	Skibbereen	Skull	Sligo	Strokestown	Tubbercurry	Tuam	Westport
.80	.36	.48	.54	.60	.56	.46	.58

Source: Baseline Reports

Table 3: Commercialization ratios for different farm sizes in selected Poor Law Unions in 1891

Farm size	Boyle	Carrick-on-Shannon	Castlebar	Dingle	Donegal	Glenamaddy	Kenmare	Millford
1- 5	0.63	0.71	0.52	0.67	0.48	0.57	0.27	0.51
5-15	0.72	0.80	0.67	0.82	0.72	0.71	0.68	0.72
15-30	0.86	0.87	0.77	0.81	0.85	0.82	0.84	0.79
30-50	0.93	0.92	0.87	0.83	0.87	0.91	0.87	0.88
>50	0.96	0.97	0.93	0.91	0.91	0.95	0.91	0.94

	Mohill	Skibbereen	Skull	Sligo town	Strokes-curry	Tubber-	Tuam	Westport
1- 5	0.39	0.53	0.56	0.66	0.73	0.43	0.83	0.61
5-15	0.77	0.74	0.71	0.84	0.78	0.72	0.73	0.78
15-30	0.86	0.87	0.84	0.87	0.85	0.82	0.79	0.81
30-50	0.92	0.90	0.89	0.89	0.91	0.85	0.89	0.76
>50	0.96	0.94	0.94	0.96	0.97	0.93	0.96	0.91

Source: Derived from published data.cw11

The foregoing data make clear that decision-making and economic behavior on West of Ireland farms at the turn of the century were to a considerable degree influenced by external market forces. That said, two points are worth noting. In the process of market incorporation households developed a variety of survival strategies. In an attempt to account for the spatial and class location of the stem family in Ireland, I argued previously that in areas where abundant labour supplies had been eroded by death and emigration, the three-generation extended family became a means of reducing costs and meeting labour shortage (Gibbon and Curtin, 1978: 443) . Seasonal and permanent migration both reduced the numbers to be fed in the western region and brought in earnings from outside. The rise of capitalism, albeit in another country, provided employment for West of Ireland migrants whose repatriated earnings helped to support households in the home country. Furthermore the household did provide by itself, or in association with other households, a considerable portion of its means of subsistence. As Smith points out, the reproductive cycle of peasants is " dependent upon the package of non-commoditised relations into which the unit is inserted" (1985:101). Hence the community provided a range of services,especially unpaid labour through cooring and meitheal, and, as Hannan has shown, a steady supply of marriage part-

ners. This evidence indicates, then, that although commoditization of the local economy was substantial, this did not lead to a total decline of small-scale household production and may even have contributed to the survival of sections of the peasantry, in particular the middle peasantry.

Demographic versus social differentiation

The essence of this argument is that peasant households reproduce themselves over time rather than differentiate into social classes. For this to take place the capacity to adjust land to changing demographic conditions of the household must be present and to fulfill this condition a steady supply of land must be available. This involves both actual acreage and the legal and social basis of land ownership. In pre-Famine West of Ireland something approaching this situation may have existed as population increased consequent upon subdivision and subletting (O Neill, 1984, 39). In the post-Famine period, a process of consolidation was well underway and people adjusted to land through emigration rather than vice versa. Consolidation was also facilitated by the universal acceptance of the practice of impartible inheritance.

The long-term pattern was for the total number of farms to decline and for household failure to be most associated with the smaller farms. This can be illustrated by looking at national, county and local level figures. Nationally, farm holdings of 1-5 acres declined from 182,000 in 1845 to 88,000 in 1851, to 62,000 in 1910. Farms between 5-15 acres underwent a similar if less severe reduction. Gibbon's analysis of statistics for County Clare also shows that the decline in the total number of holdings was mostly explained by the disappearance of smaller farms (1973:486). An examination of landholding for a smaller unit in Co Leitrim for the period 1851-1980 reveals a similar pattern, i.e. smaller holdings showing a sharp decline and medium and larger size holdings increasing in number (see Table 4).

In post-Famine Ireland, the agrarian class structure became simplified. The numbers of cottiers and rural labourers had greatly declined. Individuals from failed households were forced to sell their

labour power but usually both in another country and another branch of production. Households with small amounts of land could only survive with the assistance of off-farm employment. Such opportunities were limited but some income could be derived from seasonal migration and from part-time work for the state, usually on road maintenance schemes which until the 1950s were heavy users of labour. Market conditions and technical advances - initially the shift from labour-intensive to horse-drawn methods and later to tractor technology (Kennedy, 1973:86-109) - worked against the small peasants. The dominant force became the middle peasantry who successfully combined domestic, communal and market survival strategies.

The debate on demographic versus social differentiation has tended to cloud over another level of differentiation, namely intra-household differentiation based on age and sex difference. The farmer patriarch was in a position to exploit both the labour of his children, inheriting and non-inheriting, and his wife. In Arensberg and Kimball's study the household division of labour is represented as displaying a rough equality. Males and females had different tasks and occupied separate social spheres but each specialism was essential and respected at household and community level. Anthropological writings have, of course, often ignored the question of sexual differentiation and the relative status of men and women (Rogers, 1978:122) and it is perhaps unfair to castigate Arensberg and Kimball unduly. However, what we learn of farm women from their study is largely through the eyes and mouths of men. Adopting Sanday's measures of female status, namely female control over farm produce, external or internal demand or value placed on female produce, female participation in at least some political activities, and female solidarity groups devoted to female political or economic interests (Quoted in Rogers, 1978:140), then there is evidence in the family and community for suggesting that women had low status. This is supported by McNabb's study (1962) of the more prosperous farming community in Limerick. He writes: "If the farmer goes to market or to town he usually makes a day of it. Any outstanding sporting event is also an excuse for a day off. The wife and adult children are expected to take on the farm duties while he is away. The farmer is seldom accompanied by his wife and excuses himself by saying that someone has to stay at home to look after the place. But the wife cannot leave her duties as lightly as the farmer" (1962:

43-44) and again "The farmer has many opportunities for leisure time activities even during the busy summer season. His working day is broken by visits to the fair and to town, and his evenings can be spent at the local pub. There are week-ends off for hurling matches and days for popular race meetings. By contrast, his wife's life is one of unrelieved monotony. Her household duties are onerous and unvarying and take up most of her time, and to these must be added the farmyard duties which she must shoulder when her husband is absent" (McNabb, 1962:43-44).

Table 4. Number of Agricultural Holdings by size (in acres) in Mohill, Co Leitrum, 1851-1980

Year	1-5	6-15	16-30	31-50	51-100	101-200	200 +	Total
1851	131	462	278	66	25	9	5	976
	13.4%	47.3%	28.5%	6.8%	2.6%	0.9%	0.5%	100%
1927	61	291	304	85	30	4	3	778
	7.8%	37.4%	39.1%	10.9%	3.9%	0.5%	0.3%	100%
1953	24	196	329	110	38	8	3	708
	3.4%	27.7%	46.5%	15.5%	5.4%	1.1%	0.4%	100%
1970	14	95	248	144	80	9	4	594
	2.4%	16.0%	40.8%	24.2%	13.5%	1.5%	0.7%	99.9%
1980	11	68	68	143	91	12	4	520
	2.1%	13.1%	13.1%	27.5%	17.5%	2.3%	0.8%	100%

Source: Unpublished Agricultural Statistics : Central Statistics Office, Dublin.

The future of peasant farming

Although Chayanov was both aware of and discussed some of the implications of the intrusion of the capitalist economy on peasant farm organisation (1966: 250-257), he argued that "the labour farm strengthened by cooperative bodies will be able to defend its position against large-scale capitalist production" (1966:256). This was in direct opposition to the view held by Marx, Lenin and Kautsky who argued that this form of production would ultimately be destroyed, since it was a transitory phenomenon and peasants would be transformed into either small capitalists or wage labourers.

There is now, it seems, considerable evidence from many different

studies to support Chayanov's optimistic view on the persistence of family labour farms or at least to suggest that the agrarian transition of Marxist theory is a very slow one. In the Irish case we can point to the less than dramatic decline in the total number of family farms, and to the increase in average farm size and sharp decrease in the number of farms employing labour. The persistence of household production, however, has to be understood not only in relation to its internal dynamic but also by reference to changing external conditions. As De Janvry (1980: 162-165) points out, under certain circumstances, small-scale enterprise has the competitive edge over capitalist production, or may be sustained by its articulation with the latter and by particular state policy.

In Ireland, state policy in regard to land reform, agriculture and social welfare has been especially important. In the late 19th and early 20th centuries, the British colonial state implemented a land reform whose objective was to establish a system of peasant proprietorship in Ireland. This policy was the outcome both of agrarian agitation and the expectation that the transformation of tenants into landowners would bring about a level of political stability. Following political independence in 1922, the native state continued this policy of land redistribution and reorganization. Many prominent politicians, De Valera in particular, were imbued with the ideology of rural fundamentalism and the 1937 Constitution had enshrined in it support for the family farm and the value for society of having as many people as possible engaged in agricultural work. The activities of the Irish land commission were certainly important in reducing the impact of tendencies towards land concentration, although, at the same time, no law was enacted to place limits on maximum farm size.

The precise impact of agricultural, and in particular price, policies is complex. Although ostensibly designed to aid small producers, research to date indicates that even those policies have actually benefitted more the large producers. Price policy favours the larger farmer (Matthew, 1982) and research and advisory services tend to focus on the medium and larger farms. On the other hand, state social security schemes and Small Farmer Assistance ('dole') have been significant in ensuring household survival. Also many households have benefited from state policy on dispersed industrialization which has generated off-farm employment [4]. Smallholders who obtain such off-

farm work are able to achieve a household income comparable to medium size full-time farmers (Kellegher and O Mahony, 1983).

A number of writers have also argued that the persistence of small-scale household production may be attributed to the fact that it is functional for capitalist development itself (Mann and Dickinson 1978; Vergopoulos 1978). From this perspective the role of West of Ireland small farmers in the cattle industry is particularly illustrative. Small farmers rear animals from being calves until they are between 2 to 3 years old, after which they are transferred to the larger farms in the East for fattening. This division of labour allows the larger farmers to specialize in the most profitable end of the trade.

If, however, we consider income and production differentials, then the situation for the small farmer does not look so good. Data presented in Table 5 show that there is a very stark contrast in the rates of increase in output, expenses and income between smaller and

Table 5: Index of changes in gross output, net expenses and family farm income per farm, 1955-58 to 1980-83[a]

Period	Farm size (acres) 5-15	15-30	30-50	50-100	100-200	200+
			Gross output: 1955-58=100			
1972-75	157	188	252	290	324	329
1980-83	501	574	812	1149	1152	1290
			Net expenses: 1955-58=100			
1972-75	173	205	258	290	301	313
1980-83	723	777	1119	1500	1409	1526
			Family farm income: 1955-58=100			
1872-75	147	178	248	289	356	354
1980-83	371	457	604	836	840	902
Per cent of farm work force 1981	3.6[b]	15.9	25.6	34.1	15.5	5.3

[a] For all farms in the Republic
[b] 10-15 acres

Source: Derived from National Farm Survey (CSO 1961). Farm Management Survey (An Foras Taluntais, various years). Census of Population 1981, Volume 4.
Taken from Commins 1986:52.

larger farms. The shift in production to the larger farmers has been most noticeable in the dairy sector. Both nationally (Tovey, 1982) and regionally the number of smaller producers in this sector has continued to decline. Between 1975 and 1981 total suppliers to North Connaught Farmers Cooperative (NCF), one of the largest cooperatives in the West, declined by 11 per cent, while the decrease in producers supplying less than 1000 gallons annually was 53 per cent. There was a massive 333 per cent increase in producers supplying 15,000 gallons or more. On the other hand, we must stress the capacity of small farmers in the West of Ireland to survive even in the face of increasing pressures on them to abandon farming. Their desire to hold on to their land is underlined by the almost 100 per cent rejection of the EEC farm retirement scheme.

Thus, we can argue that processes work in both direction; some factors work against the long-term survival chances of the small farmers and some work in their favour.

Conclusion

In attempting to understand structure and change in West of Ireland agriculture, we must, I believe, move beyond Chayanov's ideas. His emphasis on the internal logic and subjective equilibrium of the peasant family farm is out of line with the dependence of the peasant household on external factors for short- and long-term reproduction. It is, it seems, more useful also in the West of Ireland context to talk, if not of classes within the peasantry, then of a series of peasantries based on differential access to land and capital rather than simply demographic differentiation. Measured in terms of farm size, the survival rate of West of Ireland farmers is impressive but using production and income indicators a less rosy picture emerges.

The relevance of this conclusion for the debate on Arensberg and Kimball is as follows. Gibbon is essentially correct in pointing to the long-term capitalist incorporation of the West of Ireland peasant economy but overstates its negative implications for medium size household producers. Hannan correctly points to the successful survival strategies of the middle peasantry but incorrectly, and unneces-

sarily for his argument, stresses their market isolation. On balance, then, the evidence suggests that it is perhaps best to conceptualize West of Ireland small-scale primary producers as 'domestic commodity producers', a form of production which draws upon the household for its labour supply and which is embedded in sets of non-commoditized relationships through family and community ties, but which depends on articulation with commodity markets to realize the value of what is produced and to acquire both personal consumption goods and means of production (Sinclair, 1985:18). Thus understanding change and development in the West of Ireland can only progress further through a careful analysis of the interrelationships between capitalist and non-capitalist forms of production and by focusing upon what Long has called 'the adaptive strategies developed by rural producers for solving their livelihood problems' (1984). Such an approach allows us the possibility of understanding recent changes in West of Ireland agriculture in terms of their historical specificity (for example, considering the role of the EEC as well as long-term structural patterns), whilst at the same time avoiding the errors of simplistic 'modernization' or 'peasantization' models.

NOTES

1) Varley holds the view that Arensberg and Kimball fail to develop a fully-fledged functionalist theory (1981).

2) A full statement of Hannan's position was later presented in Hannan (1979).

3) See Meyering (1983:121-128) for a similar statement on the impact of improvements in communication for peasant production and marketing practices in the French Combraille.

4) Sinclair (1985:143-144) draws attention to the part played by government assistance in the form of unemployment insurance for the survival of small-scale fishing in North West New Foundland.

V. THE SOCIAL REPRODUCTION OF PETTY COMMODITY ENTERPRISE IN CENTRAL PERU[1]

Norman Long

Introduction

As anyone who has worked on third world economic systems will readily appreciate, a major challenge to the understanding of such economies is their heterogeneity as reflected in the co-existence and combination of many varied forms of production, distribution and exchange. One feature of this that has often been noted is the persistence and, under certain conditions, the proliferation of small-scale, non-agricultural enterprises. These enterprises, although clearly committed to commodity exchange and capitalist markets, exhibit low levels of capital investment and output, and deploy a small labour force (generally less than about 10 workers) which is based, at least in part, on non-wage, household labour. Despite the prediction made by some early Marxist and non-Marxist writers alike that such small-scale, non-capitalist enterprises would in the long run wither away in the face of capitalist expansion, there is in fact convincing evidence that such forms possess considerable survival value and continue to play a significant role in the economic structure of contemporary third world countries (Roberts, 1978:127-131; Portes and Walton, 1981:91-103). Furthermore, according to employment statistics for 1970 to 1982, the economies of Europe are experiencing a parallel upsurge of small businesses and self-employed forms of work (Boissevain, 1981; Bechhofer and Elliott, 1985: 192-196)[2].

This chapter aims to develop, through the detailed discussion of specific empirical material, an analysis of the processes of social reproduction characteristic of such petty commodity enterprise. The petty commodity form of production, which includes artisan and small-

scale workshop production and various service activities such as small-scale trade and transport, is characterized by being heavily committed to commodity markets for the purchase of inputs and sale of products, relatively independent in terms of the ownership and control of the means of production, and possessing a labour process, with little separation of capital and labour (Gibbon and Neocosmos, 1985: 170). Historically, it has never constituted the dominant mode of production.

An interesting theoretical paradox arises with respect to petty commodity enterprise under capitalism. On the one hand, capitalism, given its inherent expansionist tendency, necessarily entails the increasing rationalization and capitalization of the economy leading to the real subsumption or destruction of petty commodity forms; whilst on the other hand, it appears in the interests of capital (especially in peripheral economies) to devise modes of maintaining and subordinating these and other non-capitalist forms in order to extract surplus and accumulate capital. As several of the papers in the present volume indicate, the full implications of this paradox remain unexplored in the literature on commoditization. One of the reasons for this, I suggest, is that insufficient attention has been given to analysing in depth the interpenetration of capitalist and non-capitalist relations of production in the organization and functioning of different types of enterprise. A careful analysis of differences within the non-agricultural petty commodity sector would allow not only for the identification of the characteristics and interconnections of different types and scales of economic operation but would also enable one to locate the points at which capital accumulation is occurring and to relate this, perhaps, to particular organizational strategies.

There may in fact be important differences between the various social divisions of labour as reflected in the contrast between transport, trade and artisan activities. These occupations differ in their internal patterns of work organization and market integration. Also, within a single occupational category, there will exist differences in economic performance that result from differential access to, and use of, resources: these latter not only include factors such as fixed capital and labour, but also information and the social support necessary for undertaking a particular occupational activity. Closely re-

lated to this question of differentiation among enterprises is the necessity of examining the internal processes of exploitation and dependency that may develop between individuals and groups occupying different statuses within petty commodity branches of activity.

In examining such problems, we must move beyond a simple characterization of economic strata among petty commodity producers or traders to a fuller consideration of the specific sets of relationships involved in the maintenance and modification of these economic levels and types of enterprise. This requires a close analysis of the types of social relationships and cultural devices directly or indirectly utilized in particular labour processes.

An understanding of labour processes necessarily involves a specification of the "internal" relations of production, such as the pattern of work organisation and associated property relationships; it also entails a consideration of various interpersonal and inter-group relationships that lie outside the actual production process[3] but which are essential to its reproduction [4]. However, it should not be presumed that production units, classified as falling under the same mode or form of production, will manifest the same combination or conjuncture of internal and external relationships, since demographic, ecological and cultural variations may produce organisationally different outcomes. A more complete analysis of the social relations of production pertaining to particular modes or forms of production therefore requires an examination of the differential use and influence of social and cultural resources in the labour process so that we might identify and account for organisational variations and performance. While the importance of considering internal and external patterns of co-operation and of exploring the role of "non-economic", superstructural factors in the reproduction of production relations have been emphasized by some writers (e.g. Terray, 1972; and Godelier, 1977), little attention, it seems, has been accorded to the problem of the specific conjunctures of factors that arise and how these generate socially differentiated forms within broadly similar structural circumstances. Hence the study of social reproduction in non-capitalist and semi-capitalist forms that are subordinated by contemporary capitalism raises a host of complex and thorny problems for analysis which cannot be resolved until more serious note is taken of the problems of differentiation and variation. Most Marxists seem to

concentrate upon showing how so-called 'subordinate' forms have been modified in accordance with the requirements of the 'dominant' capitalist system. Much less attention has been given to elucidating the internal operating mechanisms and explaining the organizational variations that arise. One advantage of such an analysis is that it enables one to better understand how these relatively autonomous features of subordinate forms feed back upon the dominant capitalist mode and in turn modify its functioning [5].

In order to show how one might develop such an analysis of social reproduction I intend to explore two related themes. The first concerns the specification of the operational requirements associated with particular petty commodity types of economic activity, giving emphasis to the mobilization and organization of resources through the use of social networks and normative frameworks. These sets of social relationships are critical for providing the necessary inputs for performing in particular occupational niches and for reproducing particular organizational forms. The second (which I can only deal with briefly) focuses upon the household as a consumption and domestic-management unit in which labour process strategies are formulated and acted upon in accordance with shifting internal and external demands. The study of household strategies allows one to examine how production and consumption activities are interrelated. The argument is illustrated by reference to the Central Highlands of Peru where numerous small-scale enterprises have proliferated alongside, and partly in response to, the development of large-scale mining and other forms of capitalist penetration.

The persistence of small-scale enterprise in Central Peru

The socio-economic structure of the Mantaro region of Central Peru is highly diversified. Close to the main valley area are important mining centres, the bulk of whose workers come from the region itself, and in the surrounding highland zone we find some of Peru's largest and most modernised livestock enterprises. Huancayo, the principal commercial and administrative centre of the region, is one of the fastest-growing cities with a population of about 150,000 in the early 1980's. But concomitant with this growth has been the rapid increase in the number

of small-scale enterprises: 76 per cent of employed males in fact work for enterprises of 10 or less workers (Long and Roberts, 1984, 146). The rural-agricultural sector consists of a great diversity of forms of production and land tenure based on smallholder farming. The marketing system combines traditional barter exchange and rotating village markets catering essentially for local consumption, together with distribution markets and large numbers of independent traders and middlemen who supply Lima and the mines with foodstuffs and who bring into the region a wide range of manufactured and processed goods. We also find a varied assortment of small-scale handicraft workshops specializing in both tourist and local consumer products and a large number of self-employed artisans and service workers. The region, then, is made up of a complex mixture of agricultural, commercial, craft, and small industrial and service industries (for details see Long and Roberts, 1984).

Another characteristic is its relatively low level of economic centralization. For example, much of the agricultural produce is marketed directly from the villages to the coast and mines and does not pass through Huancayo, nor is it controlled by Huancayo-based traders, whose main field of operations tends instead to be the poorer hinterland to the south. Also, although Huancayo functions as a distribution centre for manufactured goods, many village shopkeepers and residents prefer to make their purchases directly from Lima. This is facilitated by the excellent network of road and rail communications. The tendency to link up directly with Lima is reflected too by the way in which local groups negotiate with government agencies in Lima rather than operate through their regional offices in Huancayo. The area is also notable for its high out-migration of individuals and households seeking jobs or a better education.

Economic resources are highly dispersed. The smallholder basis of farming, coupled with variations in microecology, and an inheritance system which divides family property among all surviving children, leads to the fragmentation and dispersal of plots. Many families have small parcels of land distributed in different parts of a village or in various locations throughout the valley or even in distant jungle or highland zones. This land pattern is further complicated by the various arrangements made for land utilization: these range from private freehold to various sharecropping and renting systems. In

addition, villagers and city dwellers alike tend to own houses or other property in more than one location. Migration encourages this since city workers may return to settle in the villages and village entrepreneurs may eventually move out to reside in the cities. This pattern of dispersed economic investment is particularly prevalent among the traders and transporters, several of whom control businesses both in the valley and in Huancayo or the mine towns.

Associated with this diversity and dispersal of economic resources is the generally small-scale nature of economic activity. In the villages, small towns and in Huancayo itself, there are no really large enterprises. This is true not only for agriculture but also for other branches of enterprise. Thus, although there are several hundred trucks operating in the area, there is not one registered trucking company. Likewise, the 81 bus companies are mostly composed of single-owner bus operators who come together for the purpose of securing a route, organizing timetables and sharing the expenses of running an office. Trading and industrial ventures display the same tendency: apart from the mainly Lima and foreign-owned trading companies in Huancayo, there are no large-scale, formally-constituted firms in the region. Indeed, the tendency has been for the large firms to be replaced by smaller ones. The Huancayo textile industry, which at its height employed about 3000 workers in four factories, has now been replaced by some 400 small textile workshops, each with an average of seven employees, and by a textile co-operative of 250 members. Similarly, in the rural sector we find no locally-owned enterprises with a regular labour force of more than seven workers.

The persistence of small-scale enterprise is explicable by the diversified and dispersed nature of resources, by the generally low level of capitalization of the economy which continually suffers a drain of resources and capital to the coastal metropolis, and by the high degree of uncertainty that exists in regional and national markets. Yet, despite these evidently unfavourable conditions, the area is renowned for its entrepreneurial activity and it is not unusual for persons of peasant origin to set up small businesses and accumulate capital. One implication, however, is that, in most cases, the small entrepreneur must expand his enterprise by investing in various complementary economic ventures. There is little chance, it seems, of economic expansion through increasing specialisation of function, and

to do so is to risk heavy losses if the market suddenly contracts. The general outcome, then, is for small-scale operators to diversify their activities through the establishment of multiple enterprises.

Labour processes and social relations of enterprise

I now intend to elucidate the types of organizational patterns found among selected enterprises in the Mantaro. I focus on internal relations and on the wider sets of relationships utilized in the mobilisation of essential resource inputs. Different types of economic activity necessitate different types and levels of operational input. These inputs, however, cover more than the conventional categories of fixed capital, labour, and cash resources since they also include such dimensions as information of various kinds and social (or political) support. Many of these inputs derive from contexts that seem remote from the work situation but they nevertheless contribute to the continuity of economic activities. Also, within a specific socio-cultural context, we will find variations in the ways in which individuals manipulate available normative frameworks in order to meet the operational requirements of their enterprises.

These processes can be illustrated through a comparison of different forms and scales of enterprise and their associated external networks. Both internal and external organizational patterns can be depicted in terms of two contrasting social configurations. These I term the coordinate and the centralized pattern [6]. The former is characterised by a relatively balanced set of exchanges between individuals or groups who exercise some degree of independent control over the means of production (i.e., they have ownership and/or usufructuary rights over the necessary material resources, equipment and tools required to run their enterprises). Under this arrangement, there is no central figure of authority or power-holder, since the individuals grant reciprocal rights to each other while retaining the right to withdraw from these particular exchange relationships at any time. Hence, the networks that emerge are essentially based upon symmetrical relationships but they often have ambiguous and shifting boundaries.

The centralized pattern encompasses a wide variety of organiza-

tional forms, but, it necessarily implies a degree of centralized control or decision-making not found in the coordinate pattern. Here we find certain imbalances in the exchanges, associated with differential access to strategic resources, and the existence of a central power figure or group. Centralization results fundamentally from the dialectical interplay of two sources of power: on the one hand, individuals (either overtly or tacitly) allocate power to the central person or body so that he or she might act on behalf of the group regarding internal and external matters; and, on the other hand, power is derived from control over scarce resources and/or from links with various external power sources. The degree of centralization, of course, will vary considerably from case to case, some enterprises or networks possessing a developed hierarchy of control and sanctions, and others being less structured.

The coordinate pattern is commonly found in the Mantaro area among self-employed operators, such as transporters (fleteros), local market traders (feriantes), and street vendors. These types of enterprise operate in highly competitive market situations and tend to be small-scale. Their operational requirements are generally less demanding in terms of recruiting extra-household labour and more demanding of things such as short-term loans to meet daily contingencies and information on the availability of loads, goods, contracts, market produce and conditions. Hence, the tendency is for operators of such enterprises to establish relationships with persons working in the same or in functionally-related occupations and for these contacts to be of roughly similar economic status. The exchanges involve relatively balanced flows of information and assistance.

Given the need to develop such networks, it becomes important to examine how these are formed, consolidated and maintained. In most cases, operators draw upon pre-existing normative frameworks to develop a set of relationships based upon criteria such as kinship, compadrazgo (ritual kinship), and paisano (fellow-villager) ties. These specific relationships are derived initially by reference to non-work contexts, but they serve to define the pattern of exchanges and to give predictability of outcomes to relationships necessary for the labour process. These basically non-economic ties provide certain cultural and normative contents which may strengthen the effective work network. They also offer the possibility of mobilizing resources

beyond that set of relationships which make up the immediate coordinate pattern, since they provide a bridge to wider universes of individuals who are of potential importance for the operation of the enterprise.

Sometimes coordinate groupings of this type include associational membership, such as a social club or religious body. Associational involvement allows for a greater degree of stability among those sharing occupational relationships. The individuals become committed to a set of common goals and values which, although not directly related to the work context, none the less serve as a way of ensuring work and other transactions. This process is illustrated by the way in which religious fiestas celebrating local patron saints are utilized not only to reinforce relationships among individuals who collaborate in work relations but also to reward and pay off economic and political associates or contacts. The latter play only a peripheral role in the everyday work situation and may reside in distant localities, but frequently they are essential for the operation of enterprises since they may control access to markets and supplies. The types of contacts range from persons holding politico-administrative positions such as regional prefectos (governors) or alcaldes (municipal mayors) who are responsible for the issuing of licences for trade and transport operations within their areas of jurisdiction, to wholesale merchants and company employees who hand out contracts for transporting goods. In the case of transporters, such persons may also be mechanics or the owners of repair shops whose services are needed when vehicles break down.

Studies of fiestas in the Mantaro area show that they provide a useful organizational and symbolic framework within which a whole series of business and social contacts are renewed or created (Long, 1973: 184-7). For example, the fiesta of San Sebastian, celebrated in the village of Matahuasi, is run by a social club composed largely of individuals specializing in the transportation and marketing of local produce. Club members live either in the village or in important labour centres and collaborate informally with each other in such matters as information about contracts and prices, and in the maintenance and repair of vehicles. The membership is bound together by a network of kinship, affinal and compadrazgo ties. The usefulness of the club is that it defines the boundaries of the group in a way that

the other ties do not, providing them with an identity both within the village and in their dealings with outsiders and competitors (e.g. they carry the symbol of the club on their trucks). It also permits the development of more secure trust (confianza) relationships among members.

In addition, the San Sebastian fiesta provides members with an opportunity to offer hospitality to villagers and important outsiders and thus to establish for themselves a reputable public image. A further feature of the club is that it provides for the inclusion of other village groups and institutions (such as the Municipal Council and the Comunidad Campesina or peasant community) in organizing various parts of the fiesta. Hence, this group of transporters and entrepreneurs is successful in creating a sense of community identification with their activities despite the marked social divisions existing in the village. I would not, of course, claim that all the activities of the club are consistently designed to promote the various social and economic interests of the members. I use it simply as an example of the kind of established institutional framework found in the Mantaro area that offers some means of stabilizing and rationalizing social and economic relationships.

Other examples of the utility of the fiesta framework for consolidating coordinate relations and operational contacts are provided by the celebrations of San Domingo associated with the village of Sicaya which, in 1972, were organised by a group of butchers from Lima and livestock traders from the valley; and by the fiesta run by the wholesale market traders in Huancayo which included among its sponsors two mine officials, a merchant from Lima and several local government officers (Long and Roberts, 1974: 38).Smaller fiesta celebrations are also regularly held by taxi and colectivo operators, who invite as special guests officers of the regional police and traffic authorities. And even small pedlars and feriantes (market sellers) possess their own associations that organize social functions and fiestas.

The success of coordinate patterns depends in part upon the type of cultural and associational repertoire that is available for strengthening the exchanges that take place. Normative frameworks may be based upon egalitarian notions or they may stress asymmetrical relationships or a combination of both. The bilateral kinship system of Central Peru constitutes a highly flexible framework which offers

the possibility of stressing familial patterns of sharing and joint responsibility associated with intra- and inter-household co-operation, but it also contains within it an inter-generational hierarchy of authority. Similarly the fiesta system with its stress on community or neighbourhood participation provides a ready-made ideological framework that sanctions the development of coordinate relationships, although, through its system of offices which allocates responsibility for particular fiesta tasks, certain individuals may assume differential levels of authority or come to play a more central role in the organization. It would appear, therefore, that even with cultural frameworks which ostensibly stress egalitarian or communitarian principles there always exists the possibility of reinterpreting norms and values to legitimize social differences and unequal exchange.

Moreover, given the fact that there are always some differentials in terms of control over basic resources by individuals who make up a coordinate unit, some individuals will attempt to assert power over others in the group and introduce imbalances in the exchanges that take place. This differentiation may then be validated by reference to notions of patronage based upon unequal access to resources. Such moves may be countered by others in the group who wish to reassert the egalitarian basis of their relationships in order to curtail the emergence of inordinate imbalances of power. For example, coordinate units that consist of a network of kin, running independently-operated enterprises, but where there is an inherent tendency towards power concentration due to some differences in resource-base, will seek to reaffirm equality among participants through an appeal to general notions of reciprocity among kinsmen.

Thus, coordinate units are characterized by a degree of instability in that relationships may be reconstituted around new types of exchange and value content. Likewise, they may fragment or segment to form new coordinate units, or they may be transformed into a more centralized pattern of exchange which signifies the development of unequal power relationships and ties of dependency. In fact the ability of individuals to enter into coordinate relationships depends on whether or not they can bring to the coordinating arena resources needed by the other persons: those less able to tap useful external resource networks are placed in a disadvantageous position vis-à-vis other members. Moreover, the pattern of exchanges among members may be

modified over time due to changes in internal and external conditions (i.e., completely new sets of relationships may open up or close off for certain individuals, and this will have an impact on the functioning of the unit itself).

Coordinate units should not be conceptualized in an isolated manner. There always exist other groupings, either of the same structural type or with greater degrees of centralization and greater access to higher levels of power, which affect the performance of particular coordinate groups. Small-scale, often locally-based, coordinate units are subject to a whole series of external constraints and inducements, represented for example by the State in regulating markets and enterprises and in providing infrastructural support, or promoting the formation of organizations such as co-operatives. They are also affected by the activities of similar coordinate groups seeking to market their products or provide their services in the same markets, and by other interest groups who, for various economic or political reasons, wish to limit their operation and success.

The second type of configuration is the centralized pattern characterized by some degree of centralization of control over the labour process. Under this arrangement, members allocate power to a single decision-maker or sub-group on behalf of the whole and he, she or they derive additional power from control over strategic resources or are delegated power by external power sources. The central person or body is in charge of organizing the operational inputs and the labour participation of members.

Centralized patterns cover a wide range of different types and levels of centralization. An example of a lesser degree of centralization is that of the artisan workshop where the master (maestro) supervises the work of his apprentices and takes all major enterprise decisions concerning investment, market strategy and type of product. Although in this case the division of labour in the production process is minimal, with the master working alongside his workers, there is none the less a recognizable pattern of differential control over the ownership and the use of the equipment and materials that constitute the artisan's means of production. Not all work tasks, however, will be closely supervised and workers may be allowed to use the owner's equipment for their own individual benefit during their free time. External relations relating to the workshop are mostly controlled by

the master, who takes charge of negotiating with the suppliers of raw material and with the merchants and consumers who purchase his product. Frequently, these relationships with merchants (especially if the workshop is producing tourist goods) are long-standing and involve advances of credit. This tends to place small-scale artisans in a somewhat dependent position, but on the other hand, ensures that they are able to dispose of their product easily without having to spend time on marketing themselves. Hence, the artisan is subordinated within a wider structure of controls which determines market prices and frequently the supply of materials. Although some artisans attempt to extend their contacts with several merchants and may themselves try selling their products directly to export houses or to local consumers, they are generally restricted in doing so by the competitive and somewhat volatile market situation. Artisans may develop coordinate relations with others in their trade or with certain of the smaller market traders, but the nature of their work tends to confine them to their workshops and reduces the amount of time they can devote to such relationships. This, together with the other internal and external exigencies, leads to a more centralized pattern of work organization and to external networks which contain a number of important asymmetrical ties.

The kinds of normative frameworks that are used to support these work relations and to recruit members into the work force are similar to those generally used in the establishment of the coordinate pattern. Thus, kinship may serve to recruit workers and apprentices, and it may also provide a legitimating framework for the organization of work. As I suggested earlier, bilateral kinship may be utilized to emphasize inequalities based on status seniority and age or sex differences: hence, the master-artisan can manipulate his relations with his kinsmen-workers so as to stress their client status, although they, in turn, may respond by emphasizing the co-operative or egalitarian basis of their relationships. This gives a certain dynamic to the internal relations since they tend to fluctuate between these two poles of sentiment, although in the final analysis it is the master who is in a position to shape the basic conditions of exchange. Relations with merchants are often reinforced through <u>compadrazgo</u> ties: many masters solicit particular merchants to become baptismal sponsors for their children or they ask them to preside over other lesser forms

of compadrazgo associated, for example, with the installation of new workshop machinery[7]. These compadrazgo relationships emphasise the continuing nature of the links between the artisan and merchant but, at the same time, bring out the lower status of the master who initiates the bond. Similar forms of association exist between the larger agricultural intermediaries and their client-farmers or middlemen.

Centralised control, both in the internal and external relations of production described for the artisan workshop, results in part from the specific operational requirements of such enterprise. Unlike the self-employed transport and marketing occupations discussed earlier, the artisan and other small, industrially-based forms of activity usually necessitate the recruitment and organization of extra-household labour. The critical resource inputs are not so much information and the establishment of a wide span of relationships of support and confianza (trust) in different localities and markets, but effective organization of workshop labour of various levels of skill. The enterprise owner must devote a good deal of his energy to devising a viable strategy for production and to evolving ways of rewarding his workers without unduly increasing operational costs. In most cases this is attempted by combining "unremunerated" household labour with that of apprentices, who receive a subsistence wage, or workers paid a more standard wage. As in other cases of petty commodity production, kinship and quasi-kinship ties often provide the basic normative context for the organization of labour; this tends to infuse work relations with value contents deriving from wider fields of social relations. Although in certain respects this may strengthen the bonds between the participants, it can also generate ambivalent attitudes and conflicting expectations as to respective rights and obligations.

So far I have discussed the centralized pattern as it relates to small workshops. There are, however, more complex enterprises with much more power concentration, a greater division of labour and a more formalized pattern of hierarchical control. Although very few of these regularly employ more than about seven workers, such establishments exhibit closer similarities to capitalist forms of production in both their internal and external relations than do any of the previous types.

A major feature of such units is that the labour process typically

involves a sharper separation of capital (i.e. the managerial/ownership group) from labour, although not all workers will be remunerated by receiving a fixed regular wage. This monopolization of power comes directly from control over the means of production but is supported by higher level, external authorities (e.g. State bureaucracies), who issue business licences and offer credit and other forms of assistance. This leads to a more formal definition of the rights and obligations of participants and to the development of a more fixed system of work rewards. Furthermore such enterprises manifest a higher level of investment and tend to be more closely tied into the large-scale capitalist sector than other smaller enterprises.

Examples of such units in the Mantaro area are timber mill operators and the bigger textile and carpentry workshops. A timber mill requires considerable investment in equipment such as mechanical saws and lathes for cutting and preparing the wood, and vehicles for its transportation. It also requires relatively large inputs of labour to handle the felling of eucalyptus trees and other timber needed for the preparation of pit props used in the mines and of planks for building construction. Heavy demands of labour are also associated with the loading and transport of raw materials to the timber yard, and with the processing and shipment of the finished product to distant market centres. In most cases the labour force is divided into a number of separate work gangs that are responsible for different tasks.

The owner, often assisted by a son or brother or occasionally by his wife, directs day-to-day operations; and it is the latter group, acting as his "lieutenants" or joint owners, who often participate in investment and market decisions. These individuals seldom engage in manual labour but instead assume a supervisory role throughout the various operations. Some of them will seek out contracts and locate timber and conduct the necessary negotiations for its sale or purchase. Other members of the group are made responsible for particular work gangs and, in at least one case I came across, the timber mill employed a full-time accountant to deal with financial matters. Each member of this managerial group shares in the profits of the enterprise, although the precise way in which this is done varies from the payment of an agreed sum each month, together with extra bonuses at points during the production cycle, to the providing of small amounts of "pocket money" or money for subsistence requirements as and when

needed.

In addition to this controlling group, timber operators employ a small number of regular workers who are responsible for operating mechanical equipment and transporting the timber. These persons are normally saw or lathe operators and drivers and their assistants. Such workers may be recruited through kinship but they are generally paid a fixed weekly wage. The final category of workers consists of a fluctuating number of temporary hands who are taken on for specific jobs for set periods (often for only a day or two). These workers do most of the manual work associated with the felling and loading of timber. Since the availability of trees for cutting and the nature of contracts vary, the entrepreneur is unable to plan on having a set number of workers available each week. He attempts to solve this, and at the same time reduce his labour costs, by drawing upon a local pool of temporary labour. These workers are mostly poor smallholder or landless peasants who from time to time must sell their labour to farmers or other employers in the region. Such labour is frequently recruited from outside the community or neighbourhood of the employer and is usually not related to him through kinship, affinity or other close ties. The entrepreneur, it seems, attempts to segregate his dealings with them from sentiments of kinship or community which might create additional obligations on his part. Moreover, due to the small size of the regular labour force (there are generally no more than four permanent workers) and to the existence of a relatively large pool of temporary labour, there is no evidence of unionization developing amongst workers.

In addition to these sets of relationships which relate directly to day-to-day operations, the owner must also evolve a network of external links with mine officials and building contractors to whom he sells his timber. In fact several timber merchants had spent several years previously working at the mining centres and had developed close compadrazgo relationships with key officials in the mine administration. Such persons are significant for obtaining contracts for the supply and transportation of timber (particularly when each operator finds himself in competition with others for such work) and they are often invited to attend family and community celebrations.

On the other hand, at the rural end, timber operators need to establish and maintain a broadly-based clientele of large-scale far-

mers and smallholder peasants from whom they purchase their timber. Since most agricultural holdings (however small they may be) grow eucalyptus trees around the gardens, it is necessary for timber operators to extend their networks as widely as possible since they never know when trees will be available for sale. This requires the working of a large geographical zone and regular visiting of the farms in the area. Many peasants only sell their trees when faced with some sudden financial crisis, perhaps due to a family death or illness, and so it is extremely important for timber operators to be well inserted into the network of local gossip and to spend a lot of time interacting with farmers in the shops and bars of the area.

There is, then, the need for them to develop two sets of external relations (frequently coordinate in nature): firstly with outside commercial and administrative personnel, consolidated through gift-giving and socializing; and secondly with local farmers and peasants. The latter ties are also sustained through day-to-day contact with their client-workers.

Similar patterns of organization are found in certain carpentry and mechanical workshops, and among vertically-integrated businesses, such as those that combine livestock trading with the running of butchers' shops[8]. Increased capital investment and larger inputs of labour, which these types of enterprise entail, seem to necessitate a centralization process manifesting a more pronounced hierarchical pattern of control. Such a structure seldom rests solely upon a framework of kin ties, and in all cases some part of the labour force is wage employed. The maintenance of both internal and external relations of production partly depends upon the skill with which the small entrepreneur extends and consolidates his networks. Hence the main organizational problem he faces is the bringing together of diverse sets of social relations based on both capitalist and non-capitalist criteria: the more successfully he does this, the more he can avoid clashes of interest that disrupt the smooth operation of the business.

Multiple enterprise and the household

Although it lies beyond the scope of the present paper to analyse fully the phenomenon of multiple enterprise, it is important to em-

phasise that the expansion of small business generally implies diversification rather than specialization of economic function. Thus one timber operator was involved not only in the running of his timber mill but also in the organization of a small farm and in agricultural intermediary activities. Likewise it is common for shopkeepers to possess land for cultivation which provides a source of subsistence for their households and perhaps some surplus for marketing. Another case is that of a garage and restaurant owner who combines these businesses with the transportation of petrol, with shopkeeping and with the running of a farm. These activities are organized through the participation of members of his nuclear family together with selected kin and affines (see Long, 1979).

These patterns show that in many instances the owner of the enterprise develops a set of complementary economic activities which, while allowing expansion, functions also to spread risk under conditions of economic uncertainty. One important limit to the expansion of enterprise in Peru is the existence of certain government legislation that exposes enterprises above a certain size (usually ten employees) to a range of government controls (e.g. concerning pensions for employees, health and safety precautions and more recently the incorporation of workers into management and profit sharing). Many of these measures are theoretically applicable to any size of enterprise (e.g. employers must register domestic servants for social security) but, in practice, it is only the formally-organized and registered companies to which these controls are applied. Also, the tendency of municipal and national government to base taxation on capital assets rather than on profits penalises the larger-scale firms with fixed plant. These government regulations clearly discourage small entrepreneurs from expanding a single enterprise. But in themselves, they do not of course provide sufficient explanation for the proliferation of small-scale, multiple-based enterprises, since government regulations also protect registered enterprises and give them considerable advantages in terms of credit availability and marketing.

The petty commodity sector in Central Peru is then characterized by the prevalence of small-scale, multiple enterprises involving different types of resource inputs, and complex combinations of coordinate and centralized patterns. This generates a wide variety of organizational forms and social relations of production. It is this

which presents the major analytical challenge to understanding the social reproduction of petty commodity types of enterprise. In order to advance this type of analysis I have focused upon a discussion of the internal and external social relations associated with various labour processes.

It remains however to draw attention briefly to the significance of the household as the main arena within which decisons concerning labour processes take place. As a unit of consumption, resource management and decision-making, the household is central to understanding the ways in which individuals enter into different relations of production, both within and outside the household. Decisions regarding employment depend largely upon the consumption needs of the household, the possibilities for income-earning opportunities within the household itself, and the availability of alternative sources of income. Even in the case of peasants, household economic activities often extend beyond agriculture to include temporary or full-time employment in crafts, trade or non-agricultural wage labour. Indeed these external sources of income are pivotal in meeting household needs and in sustaining peasant forms of production. Furthermore, economic diversification in the Mantaro area has contributed to increased peasant differentiation, but with land no longer playing so large a role in capital accumulation (Long and Roberts, 1984).

Given this multiplicity of income-earning activities and variations in the size and composition of households, one can expect to find a range of livelihood strategies adopted by households of differing type. Usually among smallholder peasant households one finds some overlap between consumption and production activities, although it is unlikely that these will completely coincide since individual members often become involved in inter-household labour exchanges and/or supplementary forms of employment. Gavin Smith (1976: 10) has shown how inter-household exchanges in the Mantaro area can form a coordinate pattern, constituting what he calls a confederation of households. His example demonstrates how during an earlier period in the history of a highland Peruvian village exchanges occurred between households specializing in arable as against livestock production: this pattern was not based on extended family ties but existed within a framework of customary forms of reciprocity involving the exchange of labour, goods and services between both kin and non-kin (for

details see Smith, 1975: 42-6). Later when the village became involved in labour migration to the cities, these arrangements were extended to include households located in different economic sectors, both rural and urban. Thus, for example, co-operation developed amongst groups of brothers and/or brothers-in-law (or even sometimes non-kin) whose incomes derived from different sources - from sheep farming, arable farming, fruit and strawberry selling in Lima, and from wage labour. This took the form of assistance of various kinds. For example, one brother would work the land or care for the animals of another during his absence and, in return, the latter would make gifts and help him find temporary urban employment during slack periods of the agricultural year. It might also involve joint economic ventures. Smith emphasises that while kin relationships may predominate in these inter-household arrangements, "the demands of production relationships are likely to prevail over kinship ties and, as a result, confederations are always undergoing strains towards fragmentation and reformulation in response to the needs of the various domestic enterprises that make them up" (Smith, 1976: 14).

This stresses the need to relate household decision-making and organization to the different types of labour process discussed earlier. My discussion of coordinate and centralized patterns of organization has touched upon this issue but it requires fuller treatment elsewhere.

Conclusion

The main aim of this chapter has been programmatic in that it has sought to re-emphasize the importance of returning to a detailed analysis of the social relations of economic enterprise for understanding the nature and persistence of petty commodity forms under capitalism. Marxist analysis has explored the general problem of the 'survival' of petty commodity activities within capitalist economies but its major deficiency to date has been its failure to examine systematically the patterns of social and organizational differentiation that exist among such forms of enterprise. Also the emphasis on the role of non-capitalist relations of production in the reproduction of capitalism, leading in turn to the persistence of these subordinate forms, tends

to neglect the central question of how precisely do relationships internal and external to petty commodity labour processes serve to further their own reproduction.

My analysis therefore has concentrated upon distinguishing between different types of petty commodity enterprise and their operational requirements in an attempt to describe the different social and cultural mechanisms utilized for structuring labour processes. In this manner, I sought to demonstrate how external social networks and cultural criteria directly or indirectly enter into and affect the organization and reproduction of economic activities. The Mantaro material shows how small operators within different occupational niches draw upon a similar social and cultural repertoire but make differential use of this. The analysis identified two contrasting structural configurations - the coordinate and the centralized pattern - which, I suggested, were associated with particular types of economic activity. This was illustrated through a discussion of the internal and external social relations of occupations such as transporters, traders, market sellers, artisans and timber mill operators.

In the final section I highlighted the problems of small-scale enterprise under situations of high uncertainty and risk, and argued that in the Mantaro area small entrepreneurs had responded to this by diversifying their economic activities into several related, though often complementary, fields. The phenomenon of multiple enterprise raises complex problems concerning the interplay of labour processes associated with different types of activity. And similar complexities arise from the fact that frequently the household constitutes the arena within which such decisions over production and employment take place [9]. A fuller analysis of these dimensions in relation to varying types and combinations of labour process is clearly the next step towards a more adequate appreciation of the diversity of forms characteristic of petty commodity activity.

NOTES

1) This paper is a shortened and revised version of an earlier publication on "Informal Sector, Petty Commodity Production, and the Social Relations of Small-scale Enterprise" (Long and Richardson, 1978).

2) As Bechhofer and Elliott rightly stress, the data base necessary for establishing a pattern of recent growth for small enterprises is still largely lacking. There is also a need to reconsider the generally accepted notion, supported by Marxist orthodoxy, that the petite bourgeoisie has been in decline over the past century or so.

3) Compare my distinction between 'internal' and 'external' relations of production with Burawoy's (1985:13-14) discussion of 'relations in production', by which he means the organization of tasks associated with the work process, and the broader concept of 'relations of production' which covers all those relationships important for the appropriation and distribution of surplus. Following Burawoy's line of reasoning, the same relations in production - the same labour process - may be found in different modes of production.

4) According to Marx (1977, Chapter 23), the concept of 'reproduction' is essential to analysing the social process of production since the latter is at the same time a process that repeats and renews itself, thus creating the necessary conditions for its continued existence. Thus Marx (1977: 542) argues that

> "capitalist production ... produces not only commodities, not only surplus-value, but it also produces and reproduces the capitalist relation; on the one side the capitalist, on the other the wage-labourer."

While such a formulation sounds simple enough, many of the key issues remain contentious. A central problem concerns the scope of the conditions of reproduction and how they are precisely related to the mode or form of production. Some writers, for example, maintain that the conditions necessary to the reproduction of capitalist relations of production must be included in the economic base and therefore implicitly form part of the mode of production itself; whilst others include political and ideological factors that possess a 'relative autonomy' from the mode of production (see Himmelweit, 1983, for a succinct summary of these differences).

A recent useful contribution to the analysis of social reproduction is provided by Burawoy (1985), who shows how the reproduction of social relations in the workplace (he compares factories in America, Hungary and Zambia) is structured by 'production apparatuses' or 'factory regimes' composed of specific institutions (often set up by the state) that regulate struggles over pay, conditions and status. These production regimes are themselves shaped by various political, legal and ideological factors, including the struggles initiated by the workers themselves. Burawoy, then, concentrates upon the 'political moments' of production.

The present paper has the more limited objective of demonstrating the importance of analysing how social interactional networks and normative frameworks contribute to the social reproduction of

petty commodity enterprise. I deal only identically with the role played by the state and wider economic and political forces.

5) An interesting study which deals with modifications in capitalist production as a result of its interaction with non-capitalist forms is Scott's account of the way in which the recruitment and organization of labour during the early part of the century for the coastal sugar estates in Peru was affected by the demands of the highland peasant-based economy (Scott, 1976). See also Long, 1977: 186-7, for a general discussion of this point.

6) In making this distinction, I draw on Richard Adams' Energy and Structure (1975) where he conceptualises the idea of operating units of different organizational complexity and centrality. Adams' formulation is integrated into an evolutionary theory of societal development focusing on power structures, but it can also apply to 'lower-level' interactional processes. See Whiteford and Adams (1974) for an application of this model for understanding the adaptive strategies of Bolivian migrants in Argentina.

7) One interesting feature of compadrazgo in the Mantaro region is its extension to situations outside the formal religious context. For example, events such as the purchase of a new car, installation of equipment and machinery of various kinds, or the opening of a new shop or school may serve as occasions for the creation of a compadrazgo relationship between the owner or representative and the sponsor (padrino). In these cases, the obligations incurred are mainly financial and short-term.

8) For details on such enterprises, see J. Laite, 1974.

9) There is a large body of literature in economic anthropology which examines household organization and decision-making, and which explores relations between units of production and consumption. Much of this work, however, treats peasant household economies as relatively isolated from other economic sectors. It therefore does not often deal with multiple employment strategies which extend beyond agriculture and thus ensure the survival of peasant households. A notable exception is Smith, 1975; see also Long, 1979.

VI. COMMODITIZATION AND THE SOCIAL ORGANIZATION OF CROP REPRODUCTION: CONCEPTUALIZATION AND CASES

Louk Box

According to Marx (1977:43-87), commodities reveal their amount of value when they are exchanged with each other, commoditization being the process whereby exchange value comes to play an increasingly central role in the economy. Long (in this volume) outlines the theoretical elaborations which authors such as Bernstein (1977) and Friedmann (1978) have made of this concept. However, he also criticizes the model for not allowing sufficiently for differential producer response to change. Many observers have been struck by the continuing room for manoeuvre experienced by producers (even the poorest), and by their strategic and active role in the process of commoditization. This dynamic and active engagement by producers themselves must then be reflected in the commoditization model.

The stress on externalization of decision-making beyond the farm-household should not blind us to the existence of strategies that allow such households a greater degree of independence than is normally assumed. The stress on atomization and the suggested increase of competition among households should not prevent us from noting the cooperative tendencies present in farmers' networks, a point long since made by Bennett (1968). And the stress on material factors of production such as land, labour and capital, should not lock us into a model in which there is little place left for cultural factors, for knowledge and for differences in skills among producers. I argue, therefore, in favour of a model which is synthetic in nature. The model accepts the dominant tendencies of the commoditization of production relations consequent upon incorporation into market structures, but it also allows for the effects of producers' strategies aimed at influencing or avoiding becoming wholly dependent upon such structures. By drawing attention to these strategies we contribute to

a better understanding of the differential responses stressed by Long.

The central concern of my discussion is the transformation of agricultural knowledge systems. The term 'agricultural knowledge system' is derived from the work of Nagel (1980) and Röling (1986). Röling emphasizes the deliberate design of such systems and distinguishes between research, dissemination and user subsystems. I shall use the term to refer to the structures of knowledge considered relevant by cultivators and to the social structures involved in producing or reproducing this knowledge. The notion of a knowledge system then, refers to both the particular contents (i.e. structured knowledge), as well as to the particular form that social relations (i.e. patterns of communication and interaction) take in order to (re)produce this knowledge [1]. An agricultural knowledge system is made up of networks or patterned interactions between individuals involved in knowledge generation and transfer. Such networks may include many different categories, such as farmers, researchers, extensionists, traders or bank officials, and will usually overlap with other sets of social relations based on family or community ties, and with formal institutions such as extension services or research agencies.

Four of the terms used - cultivators, networks, reproduction and knowledge - need clarification. 'Cultivators' are all those men and women engaged in crop production or reproduction. No matter where they live, in cities or in the countryside, and no matter what their formal occupation, they all share the cultivator role. This perspective is not common in rural sociology which has traditionally overlooked the cultivator in favour of the rural settler. I use the term cultivator to emphasize the fact that it is a particular role. Cultivators may or may not be farmers, i.e. the social category of persons whose life chances and life styles are largely dependent on agricultural production. Neither does the scale of the operation matter for this analysis; cultivators may be large capitalist farmers, or small-scale peasant farmers. What is important is the role of those involved in crop management, or the production and reproduction of organic materials in order to satisfy particular socially-defined needs.

When the term reproduction is used in a general sense, I refer to the reconstitution of production conditions and the social relations of production which allow life chances and life styles to be

maintained [2]. When I speak of crop reproduction I refer to the adaptation and multiplication of particular crop varieties, and stress genetic reproduction. The social organization of crop reproduction refers to the relevant processes of communication and social interaction. Such processes can be unstructured and based on informal relationships, or formalized through specific institutions such as research and extension agencies.

Knowledge is stressed because I argue that it is in this respect that commoditization models are particularly inadequate. Although it is certainly true that wheat farmers in the United States are almost exclusively dependent (as Friedmann has argued) upon external knowledge sources because of the hybridization of this crop, it is equally true that most cultivators of tropical food crops still depend upon local networks for their knowledge of crop production and reproduction. Even the highly incorporated cultivators of The Netherlands, such as the seed potato producers, still depend upon such networks, as I indicate below. Another reason for this stress on knowledge is that until now rural sociology has tended to focus upon agricultural man and his activities. It is time that more attention was given to the study of production and reproduction and knowledge by cultivators. In this way the sociology of agriculture can make a contribution to fields such as the sociology of knowledge and cognitive anthropology.

Social organization of crop reproduction

Although crop reproduction takes place in many different ways, it is often assumed that most of the world's cultivators still use so-called 'traditional' practices with the implication that the situation remains without change. They cut their cassava stalks and plant them. They select their maize seed and sow it. They choose a boar for their sow, or a bull for their cow. Yet does this imply that the situation is unchanging and that such cultivators simply reproduce their crops without innovation?

Clearly this is not the case, since cultivators have always experimented with cropping patterns and with methods of crop reproduction (Johnson 1972, Chambers 1980, Brush et al. 1981, Rhoades 1984). My own observations in the Dominican Republic suggest that

varietal change is continuous in particular crops; it is therefore incorrect to speak of traditional varieties (Box 1983). Instead I use the term local varieties to underline that reproduction takes place locally and that intervention of formal institutions is quite limited or non-existent.

In so-called 'modern agriculture' the situation is said to be different and indeed there are some significant differences. Cassava cultivars may be reproduced through tissue culture in international research institutes, hybrid maize is selected and reproduced by seed firms in highly specialized operations, and bull sperm may be imported from abroad to fertilize cows. Reproduction has become the object of intense specialization and with it the social organization has changed. Nevertheless some of these 'modern' cultivators are themselves engaged in the reproduction on their own farms of some plants or animals; hence it would be wrong to assume that all crop reproduction activities have gone beyond the world of the cultivator. Indeed it is my contention that these locally-controlled activities continue to play an important part in crop reproduction processes.

Although externalization [3] of farming tasks has occurred, the degree to which cultivators' activities have become prescribed by external agencies varies. The latter are part of what Benvenuti (1975) calls the external technical and administrative task environment (TATE) which possesses its own rationality that shapes cultivator decision-making. I argue that the differences that exist between cultivators in this respect are great. Such differences are not exclusively due to the degree of crop commoditization, although commoditization certainly affects the social organization of crop reproduction and their corresponding knowledge systems. In addition, one must draw attention to other factors, especially the development of cultivator networks that influence decision-making with regard to crop reproduction. Under certain circumstances, such networks play an important role in the development of new technologies.

Cases: cassava, rice and seed potatoes

How are knowledge systems organized for the cultivation of particular crops? [4] To answer this I sketch crop reproduction as it relates to three cultivation systems: hillside (rainfed) cassava cultivation in the Dominican Republic; irrigated rice cultivation in the same country; and seed potato cultivation in The Netherlands. The cultivation systems illustrate different degrees of externalization: those where almost no externalization in reproduction has occurred, as in the case of cassava; those with a varying degree of externalization, such as rice; and those with a mixed record on externalization, such as seed potatoes. Both tropical crops, cassava and rice, are grown mainly as food crops in the Dominican Republic. Although some export of them does occur, they are not representative of production systems characterized by complete export dependence, such as fruit and vegetable production in Mexico designed for the United States market. Seed potato development in The Netherlands is strongly affected by export.

Cassava

Cassava (Manihot Esc. Cr) is a vegetatively propagated plant. Reproduction of a particular cultivar is carried out by taking cuttings from part of the stalk and planting them. In essence, reproduction is therefore quite simple. Most cassava cultivators in the Dominican Republic either use planting material from their own farm, or obtain it free of charge from neighbours or friends. A national survey of 1976 reported that very few cassava cultivators depended on external sources for their cuttings [5]. In a survey of 255 cultivators, conducted in 1983, in the two prime growing regions, we found that virtually nobody used external sources [6].

From twenty-five case studies among expert Dominican cultivators we learnt that most growers preferred to use their own cuttings, and that if no cuttings were available, they obtained them free of charge from acquaintances whose planting material they had inspected and approved of. Only in an emergency (such as that following a hurricane) would plant material be obtained from the state. State-supplied plant material had acquired a bad name because of its poor quality, either

due to disease or to the heterogeneous mixture of varieties concerned. In fact we could trace 'bastard cultivars' back to shipments provided through the extension service.

About half the cultivators had tried out new varieties within the last five years, though few had shown any dependence on state services for advice. Less than 5 per cent of the respondents indicated a preference for the services of an official extensionist against about 20 per cent preferring the advice of traders (Box 1984, Tables 103, 200). The only experience which cultivators had had with the state in relation to new varieties turned out to be negative. A widely publicized new variety was accepted, but proved to have such a bad taste that it could not be sold on the fresh food market (Box 1982).

Farmers selected new varieties in terms of various criteria, such as market-value (i.e. fitness for local and foreign food markets), yields, and capacity to grow on deteriorating soils. Few of the cultivators interviewed grew the crop exclusively for home consumption; most sold at least part of their harvest. Even rich farmers depended little on government services. One of them commented: "all I have here, I got for myself; the extensionists and researchers of this country could not help me a bit with new varieties". He obtained his material directly from an international research institute in Colombia or through private channels. Apparently, local research institutes did not provide interesting new varieties; their collections had little to offer, and whatever new varieties they did have, could not be transferred (Cruz & Box, 1984).

We also found that cultivator-exchange networks were quite large. Cassava varieties could travel great distances. Small traders played an important part in this distribution over longer distances, i.e. between communities, as some of their names suggest. The most popular Dominican variety of sweet cassava carried the name of such a trader, 'Zenon'; the same held for the most popular bitter variety in the Sierra region, 'Facundo'. Obviously traders have an interest in the introduction of new varieties, which are well adapted to prevailing production conditions and market preferences. The distribution within communities may happen in any number of ways, through neighbours, friends or family ties.

The social organization of reproduction is therefore characteried by an almost exclusive dependence on stalk materials obtained from

their own farms or from known farms in the neighborhood linked to each other in stalk-exchange networks. New varieties are tested and introduced but they have come exclusively from other cultivators (except in the case of some rich farmers), with traders playing an important role in their distribution between communities. Local research and extension agencies did not appear to have come up with new varieties and cultivators did not trust state-distributed planting material.

The knowledge system is largely based on informal communication involving experimentation by a great number of disparate cultivators. Some degree of stratification along the lines of professional expertise occurs. The more expert of the cultivators maintain varietal collections and specialize in testing these under different conditions. The networks linking these expert cultivators with the users of their knowledge are generally informal and rather diffuse in social composition. It was not difficult to discover the expert cultivators when doing field research, and thus to trace the networks. In each community there are some cultivators who are respected for their knowledge on particular crops. Participation of the institutionalized research and extension services in such networks is small or non existent.

As far as I know, no formal mechanisms are used to maintain these networks. They are kept together through the informal interactions of cultivators. Often, it is the curiosity of a particular grower which brings him into contact with another grower or a trader who knows of a new variety or new cultural practices. After 1978, producer associations were allowed to be formed in the Dominican Republic. By 1983, in the mountain region of La Sierra, such groups functioned as institutionalized networks; half of the respondents we interviewed indicated that, in the event of a serious problem, they would go and see other members of such producers' associations (Box, 1984b: Table 200).

This cassava case is not an exception. Indeed I would argue that many of the so-called 'traditional' root and tuber crops in the Dominican Republic and elsewhere show a comparable picture, for example yam and sweet potato. These crops are characterized by a relatively easy reproduction process, resulting in a highly differentiated set of fairly well adapted varieties (cf. Rhoades 1985 on potatoes in Peru) and a low degree of externalization as far as crop

reproduction is concerned. Even though market incorporation may be high (about 100 per cent for bitter cassava cultivation in the Dominican Republic) externalization of reproduction decision-making occurs only to a limited extent. Certainly market forces are operative, and particular varieties or clones are promoted by traders; but the selection of this material and its reproduction still largely occurs within the cultivator community, or even within the farm.

Rice

Rice (Oryza sativa) cultivation in the Dominican Republic is strongly affected by technological change. It is estimated that about 61.2 per cent of the total surface cultivated in 1984 was under so-called 'modern varieties' (MV's), developed or selected by national or international research institutes [7]. The government promotes these modern varieties by linking credit programmes to their use. Small-scale rice cultivators in land reform areas are therefore almost obliged to use them.

But not all cultivators use modern varieties all the time. Doorman (see Box & Doorman 1985:9) found, in a sample of 242 farmers in three land reform projects, that 25 per cent still used local varieties. The reasons for this vary, but include the following. Where the cropping system, such as ratooning, requires as other varieties. Ratooning (the harvesting of a second crop after allowing new growth from old stalks) is preferably used with local varieties and was practiced by about one quarter of cultivators who enjoyed good production conditions (ibid:10). Where cultivation conditions do not allow for modern varieties, as in areas with poor water control, local varieties are generally sown which are more tolerant to drought or to excess water. In the winter season, cultivators in the Nagua area were found to use local varieties when modern varieties would not grow well. Doorman discovered that the use of local varieties was as high as 80 per cent among growers faced with poor cultivation conditions.

Externalization of seed reproduction is related to the extent to which cultivators become dependent on modern varieties. This is particularly so among tenants in land reform projects dependent on state credit. Marginal cultivators, cultivating poor land, still depend on

local varieties which are more appropriate to given soil conditions. These varieties may be reproduced on local farms with no seed certification. Among those very poor farmers, working their poorly irrigated fields, externalization is therefore less than among their more favoured colleagues. Rich farmers, on the other hand, who are not dependent on the state credit system, are free to use their own channels for seed. Some of them use the local variety Mingolo for ratooning purposes, despite the fact that ratooning is actively discouraged by the state, and by inference also the use of local varieties appropriate for ratooning. They have independent access to alternative sources of credit, information and seed. Their interest in local varieties has resulted in continued seed reproduction, even against the wishes of the official agencies. In these large rice farms externalization of decision-making certainly occurs, but the interesting thing is that the ties between rich rice farmers is strong enough to resist official domination. Externalization occurs, but only to the extent that these cultivators allow it to happen.

On-farm experimentation with rice varieties is much less common than with cassava. This is partly due to the complexities of rice breeding or adaptation, selection and distribution. For local varieties the picture appears to be somewhat analogous to the cassava case. Some cultivators were found who made their own seed reproduction lots, or were even testing varieties they had obtained elsewhere. For modern varieties, the picture is radically different. Rice breeding and seed distribution has become the exclusive domain of formal institutions, such as the rice research center, the rice production development agency, and the state extension service. Given government insistence on exclusive use of certified seed, on-farm experimentation is certainly not encouraged.

The social organization of reproduction of modern varieties of rice is therefore characterized by a low degree of cultivator experimentation, which is actively discouraged by the state agencies responsible; by the dominant role played by research and extension agencies in the development and deployment of new varieties; and by the consequently high degree of externalization of reproduction decisions with regard to particular categories of farms, using certain cropping systems, or functioning under harsh production conditions.

The knowledge system regarding rice reproduction appears dualistic

in nature: the reproduction of local varieties (like Mingolo) is analogous to the cassava case, although it is complicated by the (sexual) reproduction of rice. Knowledge regarding the reproduction of modern varieties is almost absent among local cultivators, who depend completely on the extension service and other channels of formal institutions reaching them. Virtually no experimentation was found among such cultivators. Correspondingly, networks among rice producers are also likely to differ from those found in relation to cassava. Organizations, such as small credit cooperatives, are more important, even though such institutions are weak and an easy target for state agencies, such as the Agricultural Bank. In land reform areas, or places where land colonization has recently occurred, small producers are dependent on such semi-formal institutions and their related networks, since few alternative networks have had the time to develop. On the other hand, large producers have established their own networks that sometimes incorporate representatives of formal (private and state) institutions, but then on the producers own terms! This situation could be representative of tropical grain crops, such as rice and maize in other countries, and merits further investigations.

Seed potatoes

The potato (Solanum tuberosum) is the most important field crop in The Netherlands. Duch potato exports are substantial and in seed potatoes the country takes first place in the world market. Potato reproduction can be vegetative (or cloning, by cutting a tuber and then planting it) or sexual (through 'true seed'). Reproduction through true seed is an intricate process and is virtually limited to research stations engaged in the development of new varieties.

Three types of potato cultivation can be distinguished in The Netherlands: industrial, consumer and seed potato production. Here I limit myself to seed potato production. Within seed potato cultivation, two types can be differentiated: clones for local production in The Netherlands, and clones for export. It is especially among the latter that a spectacular expansion has occurred in recent decades. Developments in the 'home market' have been less remarkable, due to the dominance of famous clones (like Bintje) which have been adapted,

but not yet superceded by others. Among non-industrial potatoes, Bintje accounted for 40 per cent of Dutch acreage in 1985, as well as above one third of French potato production [8].

The organization of seed potato production in Holland takes the following form (see Van der Zaag 1985). Genetic research is centered at a number of publicly-financed research institutes, there being no single potato centre but rather various institutes each contributing to this aspect of breeding. These institutes are responsible for breeding particular traits into existing lines, such as a tolerance against particular nematodes. The institutes are supported through the Ministry of Agriculture, but are linked to farmers' interest groups. This occurs through regional research institutes, charged with the testing of particular technologies for a given crop (such as potatoes) in a given region. Such institutions are joint ventures set up by the state and private groups representing potato cultivator associations or cooperatives.

Another pattern is that of private or cooperative institutions that engage in the production and marketing of particular seed potato clones. Two huge cooperatives (ZPC and Agrico) and one private firm (Hettema) dominate this market, although they do not have an outright monopoly. Each institution or trading house specializes in particular patented clones and organizes the production of seed potatoes through affiliated contract growers. The development of new clones is done through their own nurseries, often in association with independent nurserymen. There are presently some 3500 contract growers affiliated to these various institutions.

Finally, there are several hundred independent nurserymen who obtain true seed from research institutes or nurseries and select their own clones. They may do this on a fairly large scale, as a sideline to normal seed potato cultivation, or they may operate on a small scale as 'hobby nurseryman'. It is estimated that at least one million seedlings (and a very good eye) are needed to get a clone which can be patented and sold to one of the trading houses. In Holland, a long established tradition exists in potato selection: Bintje was after all selected by a 19th century school teacher

What accounts then for the speed with which new clones have been developed and brought onto the world market? One key to the success of Dutch agriculture is, I believe, the web of what one might call

"institutionalized informality" [9] which links together the various interested parties. At all levels, formal structures have been set up to facilitate informal exchange. Among growers, for example, an intricate network of study clubs exist, in which local potato cultivators meet weekly to exchange information among themselves and with extensionists. Growers compare production results, visit each others' farms, and test particular solutions. They do not generally see each other as competitors, but share a common interest in developing a quality product that responds to existing needs and requirements. This common interest naturally tends to include the trading houses, whether or not they are organized on a cooperative base. However, it is important to emphasize that seed potato production is not characterized exclusively by cooperation and harmony. Far from it; competition between trading houses for markets is fierce.

The web of institutionalized informality goes further to include researchers and other parties involved in crop development. Researchers and producer representatives come together through the National Council for Agricultural Research, which has set up a special committee, in which the various branches of the potato industry are represented. According to Van der Zaag (1985:82), "this committee plays an important role in increasing participation and involvement in (....) research".

The social organization of seed potato reproduction has therefore the following characteristics. There is a fairly high degree of cultivator participation and experimentation in the development of new varieties or clones, which is actively promoted by government and private agencies. Formal research and extension agencies contribute but do not dominate the process of varietal development. Consequently seed potato reproduction receives a mixed score on the question of the externalization of decision-making. At the individual farm level, externalization is great, since individual cultivators are faced with prescriptions developed within their technical and administrative task environment. But if we look at the category or group of cultivators involved, another picture emerges. Cultivators participate in crop development through the influence over research institutes and extension agencies exercised by the representatives of producer associa-

tions. In addition, individual hobby growers may develop new varieties or production systems and transfer their knowledge through the study groups to which they belong, or by selling their product to a particular firm.

Few production systems are commoditized to the degree that seed potatoes are in The Netherlands. Our case study suggests, however, that relations between producers and between them and the other interested parties are not as atomistic and antagonistic as the standard model of market competition might suggest.

The knowledge system for seed potato production presents a logical combination of selected traits described for cassava and rice. As in the case of cassava, we find cultivator participation in crop development and reproduction. This is facilitated by the fact that both these crops are essentially vegetatively propagated, manifesting long traditions of on-farm experimentation with traders playing an important role in stimulating the development and distribution of new varieties. The rewards in potato selection, however, are much greater since one's revenue, if one ever makes it to a patented clone, is likely to be quite spectacular. Like the rice situation, state institutions play their part but with the crucial difference that they do not have a decisive influence. Because of the countervailing power of private interests (both cultivators' and traders') state agencies have never achieved the hold over Dutch potato breeding, as they have in the case of Dominican rice production. The resulting knowledge system in The Netherlands seems, therefore, to be more permeable to cultivators' experience and advice. The reverse also holds, namely, that since cultivators consider themselves to be part of the system, they may be more eager to accept knowledge from sources other than their own.

Conclusion

The comparison between crop reproduction systems developed in this chapter suggests a number of conclusions, that provide a fertile field for further detailed research.

The social organization of crop reproduction, it seems, may be affected most critically by externalization if cultivator interest groups are weak or absent. But if cultivator experimentation is

stimulated and the results of it integrated into an agricultural knowledge system which is fed by different parties, the picture seems to be quite different. Indeed, as I have argued, there may be externalization on the level of the individual farm which is matched by a high degree of control exercised by groups of cultivators themselves. I would therefore predict that particular categories of cultivators may not necessarily sense 'externality' as might appear from simply studying their on-farm production process. It would be interesting to operationalize more precisely different degrees and forms of externalization and to test this prediction.

The phenomenon of informal study groups was noted among seed potato growers who interact and communicate intensively with each other and with representatives from the world of formal agriscience. I suggested that in a number of ways, these growers were similar to their poorer colleagues growing cassava in the Dominican hills. They experiment with new varieties, they test new cropping systems and they exchange new knowledge or material through informal networks in which traders play a part.

The main lessons we can draw are several. First, agricultural knowledge systems dominated by formal institutions may not be so effective in stimulating change as are more informal interactional systems. Second, the organization of cultivators' interest groups may not only serve their own particular 'narrow' interests, but also the interests of the public at large by producing better varieties, entailing better food and hopefully better prices. Third, differences between levels of agricultural development (as measured in terms of input-output efficiency or by capital intensity) should not obscure the parallels that exist between cultivation systems. On the face of it, rich potato growers in Holland have little in common with poor Dominican cassava cultivators; yet at the level of their knowledge systems and in terms of their patterns of social organization of crop reproduction, similarities emerge.

My findings on crop reproduction also have implications for discussions on commoditization. The development of crops for the market and the commoditization of factors of production does not lead automatically to increasing competition among producers. Indeed, under certain conditions, cultivator cooperation continues to be important, especially, as have emphasized in this chapter, as it manifests itself

in the form of knowledge networks or farmer associations. Such networks and associations were encountered in each of the three cases. A second observation is that commoditization does not necessarily result in the progressive externalization of decision-making with regard to crop reproduction. Some cultivators, it seems, will continue to experiment with some varieties for some of the time, even though specialized modes of scientific reproduction are available. The use made of the findings of experimenting farmers is, I implied, affected by the type of social networks. If formal research institutions partake in these (as in the case of seed potato development) the cultivator's knowledge and experience can interact with that developed by the research scientist. In this way knowledge networks linking individual cultivators and other interested parties can shape the organization of crop production itself. This point ties in with the argument advanced by Long in the previous chapter on non-agricultural enterprise that "external social networks directly or indirectly enter into and affect the organization of economic activities."

I wish to reiterate that my findings argue in favour of a model of agricultural development that acknowledge cultivator participation in crop development instead of the tendency to adopt a fatalistic line which stresses cultivator alienation. Sociologists have a contribution to make to the understanding of the factors that promote cultivator participation and to the analysis of the complexities of agricultural knowledge systems.

NOTES

1) Two differences exist therefore between my usage and that of Röling. My scope is broader than that of 'deliberately designed knowledge' and includes all relevant knowledge, whether transmitted from generation to generation, casually acquired or deliberately designed. I also make no distinction between producers, users and disseminators. Given the fact that farmers are at times experimentory and scientists are at times users of particular knowledge, it seems better not to make this distinction. It has all too often been assumed that scientists generate knowledge, extensionists transfer it, and farmers use it. Reality is rather more complex.

2) See Marx 1977 (Vol. I, Ch. 23) for a full discussion of this concept.

3) Externalization refers to a division of labor through which an increasing amount of activities are performed or prescribed by agencies outside the productive unit, i.e. the farm. For a discussion on externalization see Benvenuti, 1982, and Lacroix, 1981, as quoted in Bolhuis and Van der Ploeg, 1985:55.

4) 'Crop' is used in the general sense of a plant or animal product that can be harvested for profit (see Webster's Seventh New Collegiate Dictionary, Springfield, Mass. (Merriam) 1963). Field studies were made in the Dominican Republic, Colombia, and Costa Rica in the period 1981-1985; studies in The Netherlands are in progress.

5) See US Bureau of the Census & Secretaria de Agricultura de la República Dominicana, Sector Analysis, Washington & Santo Domingo (1977).

6) See Louk Box, Cuadros Preliminares: Encuesta de Yuca, Santiago (CENDA & Investigacion Agrosociologica sobre Yuca y Arroz).

7) See R.A. Lora Ulloa & V.M. Persia Mora, Contribución de las variedades mejoradas al aumento de la productividad de arroz en la República Dominicana: 1970 - 1984, Santiago de los Caballeros, RD (Tésis, Inst. Sup. Agr.). The data are estimates on the basis of the amount of seed sold. This may underestimate the amount of local varieties still cultivated because not all seed used is bought. The term 'modern variety' (MV) appears to have replaced High Yielding Variety (HYV), popular a decade ago. The traditional-modern dichotomy is now largely abandoned in the social sciences, but still florishes in the agricultural sciences. The term 'MV' is used here exclusively to follow current usage in the latter. Varieties cannot be classified properly on the assumed criterion of modernity for the following reasons.
   a. Traditional varieties may have been adopted only recently in a given area, as I have shown elsewhere (Box 1982), or selected recently. Mingolo, for example, is a so-called traditional rice variety which, according to its name giver, was developed in the 1960's in the Dominican Republic and spread over the country in the following decade.
   b. Modern varieties are shortlived and may be considered old fashioned within a decade. The original IR - crosses, introduced in the Dominican Republic were abandoned in the 1980's.
   c. It is better to make the distinction in terms of other criteria, such as the degree of formal institutional involvement in the reproduction

of a variety.

8) Dutch data: personal communication RIVRO, Wageningen (24-3-1986). French data: Institut National de la Recherche Agronomique, Bulletin des variètès 1983. Pommes de terre, Landerneau, Fr. (Station d'Amèlioration de la Pomme de terre), 1983: 178-180.

9) 'Institutionalized informality' is a hazardous notion, because it looks like a contradiction in terms. Normally sociologists take institutionalization and informality as implying two contradictory principles. What has struck me, though, in the case of the organization of Dutch agricultural research and development is that informality characterized the relations between the different partners (i.e. researchers, technologists, extensionists, agrobureaucrats and cultivators), and that this is normatively sanctioned (i.e. individuals behaving in a strictly formal fashion will be subject to some measure of social control). This type of behaviour is institutionalized, for example, in forms of address, and in the relatively easy access which the different parties have to each other. It could be interesting to investigate this further and to explore the implications of informal relations for knowledge transfer.

REFERENCES

ADAMS, R. 1975. Energy and Structure: A Theory of Social Power. Austin and London: University of Texas Press.

ARCHETTI, E.P. and S. AASS, 1978. Peasant Studies: An Overview. In H. Newby (ed), International Perspectives in Rural Sociology. New York: John Wiley and Sons.

ARENSBERG, C. 1937. The Irish Countryman. London: MacMillan.

ARENSBERG, C. and S. KIMBALL, 1968. Family and Community in Ireland. Cambridge (Mass): Harvard University Press.

ASSADOURIAN, C.S. 1982. El Sistema de la Economia Colonial: Mercado Interno, Regiones y Espacio Económico. Lima: Instituto de Estudios Peruanos.

BECHHOFER, F. and B. ELLIOTT. (1985), The Petite Bourgeoisie in Late Capitalism. Annual Review of Sociology, Vol. 11: 181-207.

BENNETT, J. 1968. Reciprocal Exchanges among North American Agricultural Operators. Southwestern Journal of Anthropology, 24:276-309.

BENNETT, J. 1981. Of Time and the Enterprise, North American Family Farm Management in a Context of Resource Marginality. Minneapolis: University of Minnesota Press.

BENNHOLDT-THOMSEN, V. 1981. Subsistence Production and Extended Production. In K. Young, et. al. Of Marriage and the Market. London: SCE Books.

BENVENUTI, B. 1975. General Systems Theory and Entrepreneurial Autonomy in Farming: Towards a New Feudalism or Towards Democratic Planning? Sociologia Ruralis, Vol. XV, No. 1/2:47-62.

BENVENUTI, B. 1982. Dalla Mano Invisible a Quello Visible: Un'analisi Aplicata ad Alcune Tendenze Evolutive della Agricoltura Italiana. La Questione Agraria 7: 73-116.

BENVENUTI, B. and H. MOMMAAS, 1985. De Technologisch-Administratieve Taakomgeving van Landbouwbedrijven: een Onderzoeksprogramma op het Terrein van de Economische Sociologie van de Landbouw. Dept. of Sociology of Western Countries, Wageningen.

BENVENUTI, B. , E. BOLHUIS, and J.D. VAN DER PLOEG, 1982. I problemi dell'imprenditorialità agricola nella integrazione cooperativa, uno studio di caso sulle traversie dell'Avebe. Rome: AIPA.

BENVENUTI, B. et al. (forthcoming). Guastalla 2, una indagine sulla costruzione di stili aziendali divergenti. Rome: AIPA.

BENVENUTI, B. 1985. On the dualism between sociology and rural sociology: some hints from the case of modernization. Sociologia Ruralis, XXV 3/4-1985: 214-230.

BERNSTEIN, H. 1977. Notes on Capital and the Peasantry. Review of African Political Economy, 10: 50-73.

BERNSTEIN, H. 1979. African Peasantries: A Theoretical Framework, Journal of Peasant Studies, 6: 421-443.

BERNSTEIN, H. 1981. Notes on State and Peasantry: the Tanzanian Case, Review of African Political Economy, 21: 44-62.

BERNSTEIN, H. 1985. The Agrarian Crisis and Commoditization in Africa. Lecture given in Wageningen, 24th October. Congress on Technologie en Landbouwonderontwikkeling in de Derde Wereld. Forthcoming Studium Generale Paper No. 84.

BERNSTEIN, H. 1986. Is there a Concept of Petty Commodity Production Generic to Capitalism? Paper presented at the 13th European Congress for Rural Sociology, Braga, Portugal. Forthcoming in revised version in a special issue of Social Analysis on Rethinking Petty Commodity Production edited by A. MacEwen Scott.

BINSBERGEN, W.M.J. van, and P.L. GESCHIERE, (eds). 1985. Old Modes of Production and Capitalist Encroachment. London and Boston: Kegan Paul International.

BLOCH, M. 1966. French Rural History. London: Routledge and Kegan Paul.

BOISSEVAIN, J. 1981. Small Entrepreneurs in Changing Europe: Towards a Research Agenda. Paper presented to European Centre for Sociology of Work, Utrecht.

BOLHUIS, E.E. and J.D. VAN DER PLOEG, 1985. Boerenarbeid en Stijlen van Landbouwbeoefening. Leiden: Leiden Development Studies.

BOSERUP, E. 1965. The Conditions of Agricultural Growth, the economics of agrarian change under population pressure. Chicago: Aldine.

BOX, L. 1982. Food, Feed or Fuel? Agricultural Development Alternatives and the Case for Technological Innovation in Cassava (Manihot Esculenta Crantz) Cultivation. Quarterly Journal of International Agriculture, Special Issue: 34-48.

BOX, L. 1984a. Cassava Cultivators and their Cultivars; Preliminary Results of Case Studies in the Sierra Region of the Dominican Republic. In Proceedings 6th Symposium of the International Society for Tropical Root Crops, Lima (Int. Potato Center).

BOX, L. 1984b. Cuadros Preliminares: Encuesta de Yuca, Santiago, DR (CENDA-Investigación Agrosociológica).

BOX, L. and F.J. DOORMAN, 1985. The adaptive farmer: Sociological Contributions to Adaptive Agricultural Research on Cassava and Rice Cultivation in the Dominican Republic (1981 - 1984), Wageningen: Dept. of Rural Sociology of the Tropics and Subtropics, Agricultural University.

BRAVERMAN, H. 1974. Labor and Monopoly Capital, the degradation of work in the 20th century. New York: Monthly Review Press.

BRODY, H. 1973. Inishkillane. London: Irwin.

BRUSCO, S. 1979. Agricoltura ricca e classi sociali. Milano: Feltrinelli.

BRUSH, S.B. et al. 1981. Dynamics of Andean Potato Agriculture, Economic Botany 35 (1): 70-88.

BURAWOY, M. 1985. The Politics of Production. London: Verso for New Left Books.

CHAMBERS, R. 1980. The Small Farmer is a Professional. Ceres (13(2): 19-23.

CHAPA, J. 1978-79. The Creation of Wage Labour in a Colonial Society: Silver Mining in Mexico, 1520-1771. Berkeley Journal of Sociology, Vol. XXIII: 99-128.

CHAYANOV, A.V. 1925. The Theory of Peasant Economy. 1966 edition D. Thorner, R.E.F. Smith and B. Kerblay (eds). London: Irwin.

CHEVALIER, J. 1982. Civilization and the Stolen Gift: Capital, Kin, and Cult in Eastern Peru. Toronto (Buffalo) and London: University of Toronto Press.

CHRISTIS, J. 1983. Het Bravermandebat. Te Elfder Ure, (special issue on Arbeidsproces en Technologie), Vol. 33, jaargang 27, nr. 1, mei 1983, 15-58.

COLLINS, E.J.T. 1976. Migrant Labour in British Agriculture in the 19th Century. Economic History Review, 2nd series, pp. 38-60.

COMMINS, P. 1985. Rural Social Change. In P. Clancy et al (eds). Ireland: A Sociological Profile. Dublin: IPA.

CONGESTED DISTRICTS BOARD OF IRELAND, 1898. Inspectors Local Reports, 1892-1898, Dublin.

COOK, S. 1984. Peasant Capitalist Industry: Piecework and Enterprise in Southern Mexican Brickyards. Lanham, N.Y.: University of America.

CORK, 1984. Modernization and Land Reform: Real or Cosmetic? The Irish Case. Journal of Peasant Studies. Vol: 12 pp. 101-116.

CROTTY, R.D. 1966. Irish Agriculture Production: Its Volume and Output. Cork: University Press.

CRUZ, L. and L. BOX. 1985. Yuqueros y Yucólogos: El Caso del Dr. Gautier. Santiago DR: CENDA Investigación Agrosociológica; unpublished field report.

CUDDY, M. and C. CURTIN. 1981. Commercialisation in West of Ireland Agriculture in the 1890s, Report to the Committee for Social Science

Research, Dublin.
CULLEN, L.M. 1967. Problems in the Interpretation and Revision of 18th century Irish Economic History. Transactions of the Royal Historical Society, 5th series.
DANHOF, C.H. 1979. The Farm Enterprise: The North United States, 1820-1860. The Journal of Economic History Vol. 4: 127-191.
DE JANVRY, A. 1980. Social Differentiation in Agriculture and the Ideology of Neo-Populism.In H. Newby and F. Buttel (eds), The Rural Sociology of Advanced Societies. London: Croom Helm.
DURRENBERGER, E.P. 1984 (ed). Chayanov, Peasants and Economic Anthropology. New York: Academic Press.
FEDER, E. 1973. Gewalt und Ausbeutung. Lateinamerikas Landwirtschaft. Hamburg: Hoffman und Campe.
FIGUEROA, A. 1982. La Economia Campesina de la Sierra del Peru, Lima: Pontifica Universidad Católica.
FIGUEROA, A. 1982. Production and Market Exchange in Peasant Economies: The Case of the Southern Highlands of Peru. In D. Lehmann (ed), Ecology and Exchange in the Andes. Cambridge: Cambridge University Press.
FIGUEROA, A. 1984. Capitalist Development and the Peasant Economy in Peru. Cambridge: Cambridge University Press.
FOX, B. (ed). 1980. Hidden in the Household: Women's Domestic Labour Under Capitalism. Ontario: The Women's Press.
FREEDMAN, M. 1963. A Chinese Place in Social Anthropology. British Journal of Sociology, Vol. 14:1-19.
FRIEDMANN, H. 1978. World Market, State and Family Farm: Social Bases of Household Production in the Era of Wage Labour. Comparative Studies in Society and History, 20: 545-586.
FRIEDMANN, H. 1980. Household Production and the National Economy: Concepts for the Analysis of Agrarian Formations. Journal of Peasant Studies, 7: 158-184.
FRIEDMANN, H. 1981. The Family Farm in Advanced Capitalism: Outlines of a Theory of Simple Commodity Production in Agriculture. Paper presented to the Thematic Panel, Rethinking Domestic Agriculture, American Sociological Association, Toronto.
GIBBON, P. 1973. Arensberg and Kimball Revisited. Economy and Society, vol. 4:479-498.
GIBBON, P. and C. CURTIN, 1978. The Stem Family in Ireland. Comparative Studies in Society and History, Vol. 20:429-453.
GIBBON, P. and M. NEOCOSMOS, 1985. Some Problems in the Political Economy of 'African Socialism'. In H. Bernstein and B.K. Campbell (eds). Contradictions of Accumulation in Africa: Studies in Economy and State. Beverly Hills: Sage Publications.
GLAVANIS, K.R.G. 1984. Aspects of Non-Capitalist Social Relations in Rural Egypt: the Small Peasant Household in an Egyptian Delta Village. In N. Long (ed.), Family and Work in Rural Societies: Perspectives on Non-wage Labour. London: Tavistock Publications Ltd.
GODELIER, M. 1977. Perspectives in Marxist Anthropology. Cambridge: Cambridge University Press.
GOODMAN, D. and M. REDCLIFT, 1985. Capitalism, Petty Commodity Production and the Farm Enterprise. Sociologia Ruralis, vol. XXV no 3/4 (1985): 231-247.
GREGOR, H.F. 1982. Industrialization of US Agriculture, An Interpretive Atlas. Colorado: Westview Press Inc.
GUYER, J. 1981. Household and Community in African Studies. African Studies Review, 24, Nos. 2/3: 87-137.
HANNAN, D. 1978. Patterns of Intergenerational Replacement in Traditional Irish Agriculture. Conference Proceedings of the Sociological Association of Ireland. Belfast: Queens University.
HANNAN, D. 1979. Displacement and Development. Economic and Social Research

Paper no. 96. Dublin: Economic and Science Research Institute.
HARRISS, J. (Ed). 1982. Rural Development: Theories of Peasant Economy and Agrarian Change. London: Hutchinson University Library.
HAY, C.R. 1947. Life and Labour in the 19th Century. Cambridge: University Press.
HIMMELWEIT, S. 1983. Reproduction, entry in T. Bottomore et. al. (eds.). A Dictionary of Marxist Thought. Oxford: Basil Blackwell Publisher Ltd.
JACOBY, E. 1971. Man and Land, The Fundamental Issue in Development. London: Andre Deutsch.
JOHNSON, A.W. 1972. Individuality and Experimentation in Traditional Agriculture: Human Ecology 1(2):149159.
JOHNSON, J.H. 1970. The Two 'Irelands' at the Beginning of the Nineteenth Century. In N. Stephens and R.E. Glasscock (eds), Irish Geographical Studies in Honour of E. Estyn Evans. Belfast: 224-243.
KELLEGHER, C. and O MAHONY, A. 1983. Marginalization in Irish Agriculture: A Study of Low Output Farmers. Paper presented to Agricultural Economics Society of Ireland.
KENNEDY, R.E. 1973. The Irish. Berkeley: University of California Press.
KITCHING, G. 1985. Politics, Method, and Evidence in the 'Kenya Debate'. In H. Bernstein and B.K. Campbell (eds), Contradictions of Accumulation in Africa: Studies in Economy and State. Beverly Hills: Sage Publications.
LACROIX, A. 1981. Transformations du Procès de Travail Agricole: Incidences de l'industrialisation sur les Conditions de Travail Paysannes. Grenoble: INRA-IREP.
LAITE, J. (1974), Migration and Social Stratification in the Central Sierra of Peru, mimeo, Department of Sociology, University of Manchester.
LARSON, B. 1980. Cambio Agrário en una Economia Colonial: el Caso de Cochabamba, 1580-1800. Estudios Rurales Latino-americanos, 3, No. 1: 111-132.
LEE, J. 1971. The Dual Economy in Ireland, 1800-1850. Historical Studies, vii: 191-200.
LENIN, V.I. 1899 (revised editions 1908, 1977). The Development of Capitalism in Russia. Moscow: Progress Publishers.
LONG, N. 1973. The Role of Regional Associations in Peru, In M. Drake, R. Finnegan, A. Learmouth, D. Boswell and N. Long, the Process of Urbanization Bletchley: The Open University.
LONG, N., and B. ROBERTS. 1974. Regional Structure and Entrepreneurial Activity in a Peruvian Valley, Final Report presented to the Social Science Research Council, mimeo, available through British Lending Library.
LONG, N. 1979. Multiple Enterprise in the Central Highlands of Peru. In S.M. Greenfield et.al. (eds). Entrepreneurs in Cultural Context. Albuquerque: University of New Mexico Press.
LONG, N. 1984. Introduction, In N. Long (ed), Family and Work in Rural Societies: Perspectives on Non-wage Labour. London: Tavistock Publications Ltd.
LONG, N. and B. ROBERTS, 1984. Miners, Peasants and Entrepreneurs: Regional Development in the Central Highlands of Peru. Cambridge: Cambridge University Press.
LONG, N. (ed) 1984. Family and Work in Rural Societies. London: Tavistock Publications.
MANN, S.A. and J.M. DICKINSON, 1978. Obstacles to the Development of a Capitalist Agriculture, Journal of Peasant Studies Vol. 5:466-481.
MARX, K. 1977 and 1979 (originally published 1867, first English edition 1887).Capital. Volume I. London: Lawrence and Wisehart.
MCNABB, P. 1962. Social Structure in The Limerick Rural Survey, J. Newman (ed). Tipperary: Muintir Natire Publications.
MEIER, P.C. 1981. The Peasant Craftsmen of Otavalo, Ecuador. Unpublished Ph.D. thesis. Department of Sociology. University of Toronto.

MESSORI, F. 1984. La Valutazione dell'efficienza attraverso indici sintetici. Rivista di Economia Agraria, no. 4, dic. 1984: 707-726.
MEYERING, A.C. 1983. Did Capitalism Lead to the Decline of the French Peasantry?: The Case of the French Combraille. The Journal of Economic History Vol. XLIII: 121-128.
MOERMAN, M. 1968. Agricultural Change and Peasant Choice in a Thai village. Berkeley: University of California Press.
MOORE, S.F. 1973. Law and Social Change: the Semi-autonomous Social Field as an Appropriate Subject of Study. Law and Society Review. Summer: 719-746.
NAGEL, U.J. 1980. Institutionalization of Knowledge Flows: an Analysis of the Extension Role of Two Agricultural Universities in India. Quarterly Journal of International Agriculture Special Series Issue (30).
NAUT, C.A. and L. BOX. 1984. Yuqueros y yucologos. Santiago DR: CENDA - Investigación Agrosociológica.
NERLOVE, M. 1958. The Dynamics of Supply: Estimation of Farmers' Response to Price, Baltimore.
NEWBY, H., C. BELL, D. ROSE and P. SAUNDERS, 1978. Property, Paternalism and Power, Class and Control in Rural England. London: Hutchinson.
NIENHUIS, H. 1982. Over de Avebe en de zorg van de boeren voor de toekomst. Marquetalia 5:27-53.
NJONJO, A.L. 1981. The Kenya Peasantry: a Re-assessment. Review of African Political Economy, 20: 27-40.
O GRADA, C. 1973. Post Famine Adjustment: Essays in Nineteenth Century Economic History, Unpublished Ph.D. thesis, Columbia University.
O GRADA, C. 1975. Supply responsiveness in Irish agriculture during the Nineteenth Century, Economic History Review, 2nd series, xxviii: 312-317.
O NEILL, K. 1984. Family and Farm in Pre-Famine Ireland. Madison: The University of Wisconsin Press.
O TUATHAIGH, G. 1972. Ireland Before the Famine, 1789-1848. Dublin: Gill and MacMillan.
ORLOVE, B. and G. CUSTRED, 1980. The Alternative Model of Agrarian Society in the Andes: Households, Networks and Corporate Groups. In Land and Power in Latin America. B. Orlove and G. Custred (eds). Holmes and Meier.
PAHL, R. 1984. Divisions of Labour. Oxford: Basil Blackwell.
PARKIN, D. 1972. Palms, Wines, and Witnesses: Public Spirit and Private Gain in an African Farming Community. London: Intertext Books.
PATNAIK, U. 1979. Neo-populism and Marxism: the Chayanovian View of the Agrarian Question and its Fundamental Fallacy. In The Journal of Peasant Studies, 6, No. 4: 375-420.
PLOEG, J.D. van der. 1976. De Gestolen Toekomst, imperialisme, landhervorming en boerenstrijd in Peru. Wageningen: De Uitbuit.
PLOEG, J.D. van der. 1985. Patterns of Farming Logic, Structuration of Labour and Impact of Externalization: Changing Dairy Farming in Northern Italy. Sociologia Ruralis, XXV, No. 1: 5-25.
PORTES, A. and I. WALTON, 1981. Labour, Class and the International System. London: Academic Press.
POTTIER, J. 1981. The Transformation of a Defunct Labour Reserve: The Case of the Mambwe People of Zambia. Unpublished Ph.D. thesis. University of Sussex.
REDCLIFT, N. 1985. The Contested Domain; Gender, Accumulation and the Labour Process. In N. Redclift and E. Mingione (eds). Beyond Employment: Household, Gender and Subsistence. Oxford: Basil Blackwell.
RHOADES, R.E. 1984. Understanding Small-scale Farmers in Developing Countries: Sociocultural Perspectives on Agronomic Farm Trials. Journal of Agronomic Education 13:64-68.
RHOADES, R.E. 1985. Breaking New Ground: Agricultural Anthropology. Lima: Centro Internacional de la Papa.
RICHARDS, P. 1985. Indigenous Agricultural Revolution. London: Hutchinson.

ROBERTS, B. 1978. Cities of Peasants. The Political Economy of Urbanization in the Third World, London: Edward Arnold.
ROGERS, S.C. 1978. Women's Place: A critical review of anthropological theory. Comparative Studies in Society and History, Vol. 20 pp. 123-162.
RÖLING, N. 1985. Extension and Agricultural Knowledge Systems (in press).
RUBIN, I.I. 1973. (originally published 1886). Essays on Marx's Theory of Value. Montreal: Black Rose Books.
SAGE, C. 1984. Intensification of Commodity Relations: Agricultural Specialization and Differentiation in the Cochabamba Serrania, Bolivia. Bulletin of Latin American Research, 3, No. 1: 81-98.
SANDERSON, S.E. 1986. The Transformation of Mexican Agriculture: International Structure and the Politics of Rural Change. Princeton, New Jersey: Princeton University Press.
SIK, E. 1984. Reciprocal Exchange of Labour in Contemporary Hungary. Papers on Labour Economics. No. 5. Department of Labour and Education Economics, Karl Marx University of Economics, Budapest.
SINCLAIR, P. 1985. From Traps to Draggers. New Foundland: Memorial University of New Foundland.
SKAR, H.O. 1982. The Warm Valley People: Duality and Land Reform among Quechua Indians of Highland Peru. Oslo-Bergen-Tromsö: Universitetsforlaget.
SLICHER VAN BATH, B.H. 1960. De Agrarische Geschiedenis van West Europa, 500-1850. Utrecht: Het Spectrum.
SMITH, G.A. (1975). The Social Basis of Peasant Political Activity: The Case of the Huasichanchinos of Central Peru, Ph.D. thesis, University of Sussex.
SMITH, G.A. (1976), Internal Migration and Economic Activity: Some Cases from Peru, Centre for Developing Area Studies, Working Paper no. 14. Montreal: McGill University.
SMITH, G.A. 1984. Does a Commodity Economy Enrich the Few while Ruining the Misses? Differentiation among Petty Commodity Producers in Guatemala. The Journal of Peasant Studies, vol. 11, no. 3 (april 1984): 60-95.
SMITH, G.A. 1986. Reflections on the Social Relations of Simple Commodity Production. Journal of Peasant Studies, Vol. 13:99-108.
SPAHR VAN DER HOEK J.J. and O. POSTMA. 1952. Geschiedenis van de Friese Landbouw, deel 1. Leeuwarden: Friesche Maatschappij van Landbouw.
TAUSSIG, M.T. 1980. The Devil and Commodity Fetishism in South America. Chapel Hill: The University of North Carolina Press.
TERRAY, E. (1972), Marxism and "Primitive" Societies, translated by M. Klopper from French version (1969). New York/London: Monthly Review Press.
TOVEY, H. 1982. Milking the Farmer? Modernisation and Marginalisation in Irish Dairy Farming. M. Kelly et al (eds). Power, Conflict and Control. Dublin: Turoe Press.
TUPAYACHI, E.B. 1982. Economia Campesina y Mercados del Trabajo: Caso del Valle Sagrado de Los Incas. Cuzco: Universidad Nacional San Antonio Abad del Cusco.
VARLEY, A. 1981. Functionalism, Ideology and Concrete Practices in Arensberg and Kimball's Family and Community in Ireland. Paper presented to the Irish Sociological Association.
VERGOPOULOS, K. 1978. Capitalism and Peasant Productivity. Journal of Peasant Studies, Vol. 5:446-465.
VINCENT, J. 1977. Agrarian Society as organized flow; processes of development, past and present. Peasant Studies, Vol. VI, nr. 2, april 1977:56-65.
WALL, R. (ed). 1983. Family Forms in Historic Europe. Cambridge: Cambridge University Press.
ZAAG, D.E. van der 1985. Organization of Agricultural Research in The

Netherlands with Special Reference to Potato Research and Farmers' Participation. In: L. Box et al. Agricultural Research Policy and Organization in Small Countries. Report of a Workshop. The Hague: ISNAR: 76-82.

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